

p. 245

# AEROSPACE MEDICINE AND BIOLOGY

1993 CUMULATIVE INDEX

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NASA SP-7011 (384)

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# **AEROSPACE MEDICINE AND BIOLOGY**

1993 CUMULATIVE INDEX



National Aeronautics and Space Administration  
Scientific and Technical Information Program  
Washington, DC

1994

## SUPPLEMENTS COVERED IN THIS ISSUE

<i>Document</i>	<i>Page Range</i>	<i>Date</i>	<i>Coverage</i>
NASA SP-7011(372)	1-36	February 1993	January 1993
NASA SP-7011(373)	37-72	March 1993	February 1993.
NASA SP-7011(374)	73-110	April 1993	March 1993
NASA SP-7011(375)	111-150	May 1993	April 1993
NASA SP-7011(376)	151-198	June 1993	May 1993
NASA SP-7011(377)	199-238	July 1993	June 1993
NASA SP-7011(378)	239-270	August 1993	July 1993
NASA SP-7011(379)	271-322	September 1993	August 1993
NASA SP-7011(380)	323-356	October 1993	September 1993
NASA SP-7011(381)	357-374	November 1993	October 1993
NASA SP-7011(382)	375-396	December 1993	November 1993
NASA SP-7011(383)	397-412	January 1994	December 1993

# INTRODUCTION

## WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7011 (372) through NASA SP-7011 (383) of *Aerospace Medicine and Biology: A Continuing Bibliography*. NASA SP-7011, and by means of supplements, serves as a current abstracting and announcement journal for references on bioscience and biotechnology. It has been compiled through the cooperative efforts of the American Institute of Aeronautics and Astronautics (AIAA), and the National Aeronautics and Space Administration (NASA). Entries prepared by the two contributing organizations are identified as follows:

1. NASA entries by their *STAR* accession numbers (N93-10000).
2. AIAA entries by their *IAA* accession numbers (A93-10000).

## HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject, personal author, corporate source, foreign technology, contract number, report number, and accession number index.

## HOW TO USE THE SUBJECT INDEX

Two types of cross-references appear in the subject index:

1. Use (U) references indicate that the subject term is not "postable," i.e., not a valid term, and that the following term or terms are used instead. For example:

DOSE

U     DOSAGE

AIRLINERS

U     COMMERCIAL AIRCRAFT

U     PASSENGER AIRCRAFT

2. Narrower Term (NT) references refer the user to more specific headings in the same subject area, under which additional material on the subject may be found. For example:

FATIGUE (BIOLOGY)

NT     AUDITORY FATIGUE

NT     FLIGHT FATIGUE

NT     MUSCULAR FATIGUE

In addition, a searcher may use the title or title and title extension in the index to narrow further his quest for particular items; this is because subject terms may include documents on different aspects of the same subject term. For example:

BIOLOGICAL EFFECT

Vibratory force effect upon biological systems, particularly human organism.

Biological effect of cosmic and solar radiations on human body at high altitudes.

## HOW TO USE THE PERSONAL AUTHOR INDEX

All personal authors used in the abstract section citations in the individual supplements appear in the index. Differences in translation schemes may require multiple searching on the index for variants of an author's name. For example:

EMELIANOV, M. D.

and

YEMELYANOV, M. D.

## HOW TO USE THE CORPORATE SOURCE INDEX

The corporate source index entries are abridged versions of the corporate sources used in the abstract section citations in the individual supplements. The corporate source supplementary (organizational component) does not appear in the index. For example:

BOEING CO., SEATTLE, WASH. MILITARY AIRCRAFT SYSTEMS DIV.

(Source citation entry)

BOEING CO., SEATTLE, WASH.

(Source index entry)



## HOW TO USE THE FOREIGN TECHNOLOGY INDEX

The foreign technology index identifies research performed outside of the United States. Listings in this index are arranged alphabetically by country of intellectual origin. For example:

CHINA, PEOPLE'S REPUBLIC OF

## HOW TO USE THE CONTRACT NUMBER INDEX

All contract numbers that are identified in the abstract section citations in the individual supplements appear in this index. Changes by agencies in the style in which contract numbers are presented may require multiple searching for variants. For example:

AF 33(615)-71-C-1758

F33615-71-C-1758

## HOW TO USE THE REPORT NUMBER INDEX

All report numbers that have been assigned by the corporate source, monitoring agency or cataloging activity appear in this index. Variations in cataloging may result in different report number series. For example:

TP-924

ONERA-TP-924

## HOW TO USE THE ACCESSION NUMBER INDEX

All documents that were acquired, indexed, and announced in STAR during the year which have been assigned a unique identification number appear in this index. For example:

N93-10001

N93-10002

## IDENTIFICATION OF DESIRED SUPPLEMENT

The abstract and descriptive cataloging for any accession number selected from the indexes may be found in the appropriate supplement. The page number range of each supplement appears on page ii of this index. Once the range of page numbers containing the selected accession number is located in the second column, the desired supplement number will be found in the first column. For example:

Page 333 will be found in Supplement 380

## AVAILABILITY OF DOCUMENTS

Information concerning the availability of documents announced in *Aerospace Medicine & Biology* is found in the Introduction to the most currently issued supplement.

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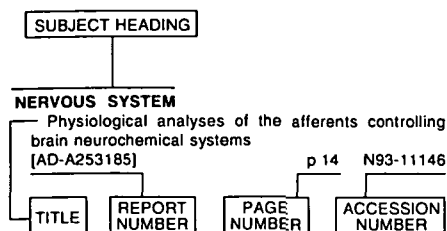
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# TABLE OF CONTENTS

Subject Index .....	A-1
Personal Author Index.....	B-1
Corporate Source Index .....	C-1
Foreign Technology Index .....	D-1
Contract Number Index .....	E-1
Report Number Index.....	F-1
Accession Number Index .....	G-1

## Typical Subject Index Listing



The subject heading is a key to the subject content of the document. The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of document content, a title extension is added, separated from the title by three hyphens. The accession number and the page number are included in each entry to assist the user in locating the abstract in the abstract section. If applicable, a report number is also included as an aid in identifying the document. Under any one subject heading, the accession numbers are arranged in sequence.

## A

### ABDOMEN

Windblast tolerance of human thorax and abdomen  
p 91 A93-19992

### ABIOTENESIS

Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824

Why are hydrothermal systems proposed as plausible environments for the origin of life? p 73 A93-18001

Hydrothermal systems - Their varieties, dynamics, and suitability for prebiotic chemistry p 73 A93-18002

Chemical markers of prebiotic chemistry in hydrothermal systems p 74 A93-18006

Hydrothermal organic synthesis experiments p 74 A93-18007

Mineral theories of the origin of life and an iron sulfide example p 74 A93-18009

Future research --- abiogenesis in hydrothermal systems p 74 A93-18010

Carbonaceous chondrites and the origin of life p 412 A93-55997

Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and other minerals p 412 A93-55998

Self-programming of matter and the evolution of proto-biological organizations [DE92-015244] p 5 A93-10628

### ABSORBENTS

Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing [SAE PAPER 921299] p 303 A93-41464

Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air [SAE PAPER 921321] p 304 A93-41483

Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 A93-11279

### ABSORPTION

Dermal exposure assessment: Principles and applications [PB92-205665] p 12 A93-10438

### ABSTRACTS

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 370) [NASA-SP-7011(370)] p 121 A93-18108

Abstracts of papers presented at the annual meeting of the Society of General Physiologists

[AD-A257718] p 121 A93-18211

Digest of Russian Space Life Sciences, issue 33

[NASA-CR-3922(39)] p 244 A93-25195

Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle

[NASA-CR-4497] p 269 A93-26157

### ACCELERATED LIFE TESTS

AFRR reports [AD-A254581] p 49 A93-12649

### ACCELERATION (PHYSICS)

A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES) [NASA-CR-192219] p 114 A93-19377

G-load effects and efficient acoustic parameters for robust speaker recognition p 146 A93-19775

Visual processing of object velocity and acceleration [AD-A261048] p 265 A93-25778

### ACCELERATION STRESSES (PHYSIOLOGY)

Effects of sustained +Gz stress on BAEP in waked rabbits p 10 A93-13531

Response characteristics of semicircular canal in cats under linear acceleration p 3 A93-13536

Observation of change in cytochrome oxidase content of cerebral cortex in rat under +Gz stress p 3 A93-13543

Effects of +Gz stress on medium- and long-latency auditory evoked responses p 11 A93-13708

Effects of positive acceleration on the microcirculation of rabbit conjunctiva, mesentery, skin, and pia mater p 4 A93-13709

Electromyographic activity while performing the anti-G straining maneuver during high sustained acceleration p 47 A93-16155

Effect of hypergravity on astronauts in space flight p 48 A93-16254

Cerebral blood flow during +Gz acceleration as measured by transcranial Doppler p 84 A93-17532

Comparison between VDV and a(rms) using simulated impulsive vibration p 91 A93-19991

Effects of +Gy stress on human body p 92 A93-19997

Flight helmet weight, +Gz forces, and neck muscle strain p 136 A93-24046

Lower body negative pressure system for simulation of +Gz-induced physiological strain p 119 A93-25210

Methods for test and evaluation of night vision goggle integrated helmets p 188 A93-27182

Gravitational stress and volume regulation p 165 A93-28709

Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244

Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712

Investigation on requirements for ejection acceleration measuring system p 332 A93-44847

Acceleration-induced effects on baboon blood chemistry p 376 A93-49224

Determinants of +Gz-related neck pain - A preliminary survey p 380 A93-49227

Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167

The accelerative stimulus for motion sickness p 410 A93-55938

Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 A93-30400

### ACCELERATION TOLERANCE

Electromyographic activity while performing the anti-G straining maneuver during high sustained acceleration p 47 A93-16155

The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204

The effect of G-LOC on psychomotor performance and behavior p 130 A93-25205

Investigation on requirements for ejection acceleration measuring system p 332 A93-44847

Perceptual scaling of whole-body low frequency linear oscillatory motion p 379 A93-49225

Comment on 'Optimum vehicle acceleration profile for minimum human injury' by C. P. Hatsell p 392 A93-49607

Incidence of cardiac dysrhythmias occurring during centrifuge training p 384 A93-52297

Acute hypertensive response to +Gz acceleration in mildly hypertensive pilots p 386 A93-52307

The limits of human impact acceleration tolerance [AIAA PAPER 93-3572] p 400 A93-52692

The effect of variable seat back angles on human response to +Gz impact accelerations p 31 A93-11559

Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 A93-29651

Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 A93-32237

Accident investigation simulation of the Kegworth air accident p 142 A93-19662

The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 A93-19705

Accident prevention Failure mode workload theory and planning p 349 A93-42848

Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 A93-19660

Cognitive factors in the air events of the Air Force during the last decade p 134 A93-19682

The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 A93-19705

Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 A93-19708

Effectiveness of birthdate biorhythm theory on flight accidents p 127 A93-19710

Accident proneness: A research review [DOT/FAA/AM-93/9] p 288 A93-28622

Accidents Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774

Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306

Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 A93-21795

Accuracy Incorporating display limitations in a model-based analysis of flight simulator fidelity [AIAA PAPER 93-0859] p 137 A93-24923

Determinants of performance rating accuracy: A field study [AD-A264726] p 342 A93-30575

Acetoneitrile On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791

Acidity A modified method for investigating gastric secretion in aviation medical examination p 359 A93-45692

Acidosis Metabolic factors influencing myocardial recovery from acidosis (CIC3) [AD-A252376] p 14 A93-10796



## ACOUSTIC ATTENUATION

### ACOUSTIC ATTENUATION

Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs  
[AD-A263011] p 350 N93-29406

### ACOUSTIC MEASUREMENT

Measuring hearing protection device performance using the metrosonics db-3100 sound level analyzer (dosimeter)  
[AD-A260852] p 265 N93-25787

### ACOUSTIC PROPERTIES

G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775

### ACQUIRED IMMUNODEFICIENCY SYNDROME

HIV infection in the nineties p 15 N93-11290  
AIDS/HIV in the US Military p 16 N93-11291  
HIV variability and perspectives of a vaccine p 16 N93-11294

Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297

Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients  
[NASA-CR-192382] p 172 N93-20736

### ACTIVATION

Photobiological investigations on spores of *str:ptomyces griseus*  
[ESA-TT-1269] p 277 N93-29274

### ACTIVATION ENERGY

Roles of water molecules in bacteria and viruses p 243 N93-36555

### ACTIVE CONTROL

Active control versus passive observation in a simulated flight task p 179 N93-27196  
Active vibration damping of the Space Shuttle remote manipulator system p 231 N93-31993  
Human-in-the-loop evaluation of RMS Active Damping Augmentation p 393 N93-51460

Intelligent fault management for the Space Station active thermal control system p 32 N93-11930  
Perception/action: An holistic approach  
[AD-A259597] p 235 N93-24067

Computerized atmospheric trace contaminant control simulation for manned spacecraft  
[NASA-TM-108409] p 321 N93-28977  
Vibration isolation p 365 N93-31458

### ACTIVITY (BIOLOGY)

Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 N93-44934  
Bright light delivery system  
[NASA-CASE-MFS-28723-1] p 96 N93-17058

<sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin  
[AD-A262979] p 284 N93-28293

### ACTIVITY CYCLES (BIOLOGY)

Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997

### ACTUATORS

Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier p 65 N93-13486

Primary events in olfactory reception  
[AD-A260562] p 255 N93-25944

### ACUITY

Interpupillary and vertex distance effects on field-of-view and acuity with ANVIS  
[AD-A261259] p 268 N93-26265

### ADAPTATION

Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 N93-15526

Changes of REG during 4h head-down bed-rest p 46 N93-16075

Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronectin p 47 N93-16157

Cardiovascular problems during space flight p 213 N93-30445

Adaptation of young pilots to new conditions of their work (Social-psychological aspects) p 256 N93-35220

Dynamics of the central and peripheral circulation of active rats on the first day of antiorthostatic hypokinesia (The role of training) p 242 N93-35261

Interlabyrinth otolith asymmetry under normal conditions and after the effect of a gravity change p 242 N93-35264

Structural and cytochemical signs of the development of deadaptation, as determined from blood characteristics p 252 N93-36724

The prediction of the adaptation of circadian rhythms to rapid time zone changes p 278 N93-39714

Centrifuges - Their development and use in gravitational biology p 376 N93-49210

Functional adaptation of different rat skeletal muscles to weightlessness p 377 N93-49575

Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 N93-51959

Adaptation to the simulated stimulus rearrangement of weightlessness p 403 N93-55942

Adaptation to nauseogenic motion stimuli and its application in the treatment of airsickness p 404 N93-55947

Bone loss and human adaptation to lunar gravity p 51 N93-14002

Adaptation to transient postural perturbations  
[NASA-CR-190959] p 105 N93-16699

Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362

The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness p 283 N93-27923

Specification of adaptive aiding systems  
[AD-A263071] p 314 N93-27927

Beta-adrenergic blockade and lactate metabolism during exercise at high altitude p 334 N93-29820

ADAPTIVE CONTROL

Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator p 407 N93-53038

Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts  
[AD-A254381] p 64 N93-12860

A systems approach to the advanced aircraft man-machine interface p 146 N93-19776

Adaptive autonomous target cuer p 148 N93-19784

ADAPTIVE FILTERS

Adaptive filters for monitoring localized brain activity from surface potential time series  
[DE93-003795] p 217 N93-22774

ADENOSINE TRIPHOSPHATE

Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 N93-25821

Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 N93-36557

Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity p 377 N93-49294

Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients  
[NASA-CR-192382] p 172 N93-20736

ADENOSINES

Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and other minerals p 412 N93-55998

ADHESION

Biofilm ecology of bioluminescent bacteria  
[AD-A255282] p 42 N93-14532

ADIPOSE TISSUES

Protein absorption and energy digestibility at high altitude p 115 N93-21683

A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets  
[AD-A252427] p 13 N93-10709

Monitoring human tissues for toxic substances  
[PB92-223239] p 173 N93-21498

ADJUSTING

CATS EYES adjustment procedures  
[AD-A264069] p 353 N93-29924

ADRENAL GLAND

Investigation of hemodynamics and sympatheticoadrenal system activity in air traffic controllers during their work p 247 N93-35209

Endocrinology of space/motion sickness p 403 N93-55935

ADRENAL METABOLISM

The effect of the activation of the sympatho-adrenal system on catecholamine inactivation in rat lungs p 2 N93-12864

Reaction characteristics of several neuroregulating systems of cosmonauts after a 366-day-long space flight p 45 N93-15167

ADRENERGICS

Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 N93-14973

Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 N93-28679

Xylazine emesis, yohimbine and motion sickness susceptibility in the cat p 324 N93-42450

Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis  
[AD-A255582] p 95 N93-16041

Beta-adrenergic blockade and lactate metabolism during exercise at high altitude  
[AD-A263544] p 334 N93-29820

ADRENOCORTICOTROPIN (ACTH)

Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 N93-33028

AEROBES

Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALs)  
[AD-A258364] p 121 N93-18209

Utilization of the graded universal testing system to increase the efficiency for assessing aerobic and anaerobic capacity p 246 N93-26077

AERODYNAMIC STALLING

Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 N93-28870

AERODYNAMICS

Digest of Russian Space Life Sciences, issue 33  
[NASA-CR-3922(39)] p 244 N93-25195

AEROEMBOLISM

Complement proteins and decompression sickness susceptibility  
[AD-A254448] p 50 N93-12905

AEROSOLS

Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate  
[NASA-CR-193278] p 330 N93-30665

AEROSPACE ENGINEERING

Aviation medicine research: A historical review  
[AD-A258198] p 121 N93-18217

Digest of Russian Space Life Sciences, issue 33  
[NASA-CR-3922(39)] p 244 N93-25195

Space life support technology applications to terrestrial environmental problems p 265 N93-25617

1991 NASA Life Support Systems Analysis workshop  
[NASA-CR-4466] p 310 N93-27100

1992 NASA Life Support Systems Analysis workshop  
[NASA-CR-4467] p 310 N93-27101

AEROSPACE ENVIRONMENTS

Hematological changes in space microgravity environments p 46 N93-15528

Human stress - Measurement and consequences p 49 N93-17440

K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions p 90 N93-18406

K.E. Tsiolkovsky on the problem of human survival in extreme environments (On the earth and in space) p 77 N93-18407

Evaluating robot procedures and tasks for the flight telerobotic servicer p 187 N93-27156

Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 N93-30277

Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 N93-30283

Limitations to the study of man in space in the U.S. space program p 213 N93-30285

Responses of *Bacillus subtilis* spores to space environment - Results from experiments in space p 268 N93-36556

Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture  
[SAE PAPER 921193] p 295 N93-41371

NASA Specialized Center for Research and Training (NSCORT) in space environmental health  
[SAE PAPER 921358] p 307 N93-41517

Space habitat environmental health - A systems issue p 347 N93-42151

Meeting human needs  
[AAS PAPER 91-313] p 400 N93-54306

Suited for spacewalking: A teacher's guide with activities  
[NASA-EP-279] p 65 N93-13692

Occupational ergonomics in space p 68 N93-14013

Aviation medicine research: A historical review  
[AD-A258198] p 121 N93-18217

Radiological assessment for Space Station Freedom  
[NASA-TM-104758] p 128 N93-20303

Ecosystems on Earth and in space (the possible utilization of artificial ecosystems for space life support systems) p 236 N93-24406

The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068

Final results of space exposed experiment developed for students p 329 N93-29702

Continued results of the seeds in space experiment p 330 N93-29703

## SUBJECT INDEX

Protein requirements in hypoxia or hypokinesia  
p 368 N93-32244

**AEROSPACE INDUSTRY**

Manned Space-Laboratories Control Centre (MSCC)  
training p 339 A93-43330

Human Factors Issues in Aircraft Maintenance and  
Inspection. Science, technology, and management: A  
program review  
[PB93-146975] p 234 N93-23647

**AEROSPACE MEDICINE**

Spatial disorientation and dysfunction of  
orientation/equilibrium reflexes - Aeromedical evaluation  
and considerations p 8 A93-10336

The space life sciences strategy for the 21st century  
p 1 A93-10636

Operational medicine on the lunar base  
p 48 A93-17430

Frontier Symposium on Clinical Pharmacology in Space,  
10th, Houston, TX, May 10, 11, 1990, Proceedings  
p 83 A93-17527

First intramuscular administration in the U.S. space  
program --- of motion sickness drugs p 84 A93-17534

Pharmacodynamic aspects of spaceflight  
p 73 A93-17541

Space medicine - Answering the challenge  
p 87 A93-17552

Ethical concerns in the practice of military aviation  
medicine p 89 A93-18045

Approaches to solving the problem of decompression  
safety of cosmonauts on their flights to Mars  
p 90 A93-18410

Biomedical engineering and space  
p 103 A93-20015

Animal surgery in microgravity p 112 A93-24047

Formation of the hypokinetic syndrome in the digestive  
system under conditions of weightlessness  
p 119 A93-25600

The role of rheoencephalography in the practice of  
aviation medicine p 160 A93-27649

Flight physiology - Clinical considerations  
p 164 A93-28690

A physician's workstation designed for NASA and  
earth-based applications p 189 A93-28695

Civil aviation and cardiology - Admission rules and  
follow-up of the technical flying personnel of TAP-Air  
Portugal p 164 A93-28699

Cases from the aerospace medicine resident's teaching  
file: Case No.51 - Hypercholesterolemia and heme positive  
stools in a 69-year-old aviator (clinical conference)  
p 165 A93-28702

Rated performance, cardiovascular and quantitative  
EEG parameters during simulated instrument flight under  
the effect of terfenadine p 165 A93-28708

Living and working in space - Evolution of nursing in a  
new environment p 166 A93-28710

Health services at the Kennedy Space Center  
p 154 A93-28711

Emergency medical operations at Kennedy Space  
Center in support of space shuttle p 166 A93-28712

Kennedy Space Center environmental health program  
p 166 A93-28713

Environmental monitoring and research at the John F.  
Kennedy Space Center p 154 A93-28714

Challenges of space medical operations and life  
sciences management p 155 A93-28716

Aging, expertise, and narrative processing  
p 180 A93-28724

In vivo testing confirms a blunting of the human  
cell-mediated immune mechanism during space flight  
p 167 A93-28732

Aseptic technique in microgravity p 168 A93-28737

Cases from the aerospace medicine residents' teaching  
file: Case No.52 - A flyer with syncope (clinical  
conference) p 168 A93-28740

Electroencephalogram epileptiform abnormalities in  
candidates for aircrew training p 170 A93-28757

Working hours and fatigue of Japanese flight attendants  
(FA) p 171 A93-28762

Hypertension and the probability of an incapacitating  
event over a defined period - Impact of treatment  
p 215 A93-32777

Cardiac pacing and aviation p 215 A93-32778

Unconsciousness in flight and its prevention  
p 217 A93-32787

Data bank establishment principles as applied to the  
problem of physiological norms in space medicine  
p 249 A93-35234

Bibliographic guide to publications in aerospace  
medicine and related topics p 252 A93-35500

New aspects of using hyperbaric oxygenation in aviation  
medicine p 252 A93-36742

Occupational health problems in aviation medicine  
p 252 A93-36743

Hyperbaric treatment operations aboard Space Station  
Freedom  
[SAE PAPER 921142] p 292 A93-41328

A systems approach to water recovery testing for space  
life support - Initial biomedical results from the ECLSS  
Water Recovery Test and plans for testbed utilization  
[SAE PAPER 921210] p 295 A93-41386

Crew Health Care Systems installations for Space  
Station Freedom  
[SAE PAPER 921249] p 298 A93-41420

NASA Specialized Center for Research and Training  
(NSCORT) in space environmental health  
[SAE PAPER 921358] p 307 A93-41517

Medical care on the moon p 331 A93-42126

Comparison of treatment strategies for space motion  
sickness p 386 A93-52402

Medical concerns for exploration-class missions  
p 386 A93-52409

Meeting human needs  
[AAS PAPER 91-313] p 400 A93-54306

Remote medical systems for the human exploration of  
space  
[AAS PAPER 91-321] p 401 A93-54309

Review of the space medico-engineering research in  
China  
[AAS PAPER 91-623] p 402 A93-55802

NASA's manned space flight program  
[AAS PAPER 91-626] p 402 A93-55805

Aerospace medicine and biology: A  
bibliography with indexes (supplement 365)  
[NASA-SP-7011(365)] p 12 N93-10075

Aerospace medicine and biology: A  
bibliography with indexes (supplement 360)  
[NASA-SP-7011(360)] p 12 N93-10076

Aerospace medicine and biology: A  
bibliography with indexes (supplement 364)  
[NASA-SP-7011(364)] p 12 N93-10077

Aerospace medicine and biology: A  
bibliography with indexes (supplement 366)  
[NASA-SP-7011(366)] p 12 N93-10079

Aerospace medicine and biology: A  
bibliography with indexes (supplement 367)  
[NASA-SP-7011(367)] p 12 N93-10080

DoD space radiation concerns  
[AD-A253135] p 13 N93-10613

Allergic, Immunological and Infectious Disease Problems  
in Aerospace Medicine  
[AGARD-CP-518] p 14 N93-11283

Space flight and immune system p 14 N93-11284

Relating cognitive function to military aviator  
performance in early HIV infection p 17 N93-11298

Epidemiologic view of allergic diseases in North America:  
Implications for aerospace medicine p 20 N93-11311

In vivo and in vitro diagnosis of allergic respiratory  
disease during screening procedures in the Italian Navy:  
Comparative evaluation of a recent quantitative  
automatized enzyme immunoassay method to dose  
specific IgE p 21 N93-11314

Asthma in aircrew: Assessment, treatment, and  
disposition p 21 N93-11315

Allergy screening and follow-up in student pilots of the  
Belgian Air Force (BAF) p 21 N93-11316

Allergic and nonallergic rhinitis in Greek pilots  
p 21 N93-11317

Assessment of programs in space biology and  
medicine  
[NASA-CR-190930] p 41 N93-13327

A health care system for the Space Station  
[NASA-TM-108093] p 65 N93-13571

Test and evaluation report of the Physio Control  
Defibrillator/Monitor, Model LifePak(tm) 6s  
[AD-A255691] p 52 N93-14103

Aerospace medicine and biology: A  
bibliography with indexes (supplement 368)  
[NASA-SP-7011(368)] p 53 N93-14603

Aerospace medicine and biology: A  
bibliography with indexes (supplement 369)  
[NASA-SP-7011(369)] p 53 N93-14731

Publications of the Space Physiology and  
Countermeasures Program, Neuroscience Discipline:  
1980-1990  
[NASA-CR-4476] p 55 N93-15583

Night vision manual for the flight surgeon  
[AD-A257059] p 104 N93-15710

Operational use of contact lenses by military aircrew  
[AGARD-AG-334] p 95 N93-15824

Adaptation to transient postural perturbations  
[NASA-CR-190959] p 105 N93-16699

Possible biomedical applications and limitations of a  
variable-force centrifuge on the lunar surface: A research  
tool and an enabling resource p 83 N93-17458

Aerospace medicine and biology: A  
bibliography with indexes (supplement 370)  
[NASA-SP-7011(370)] p 121 N93-18108

Aviation medicine research: A historical review  
[AD-A258198] p 121 N93-18217

A computer-based visual analog scale  
[AD-A258152] p 122 N93-18280

A study of illness related lost time in transport aircraft  
crewmembers  
[AD-A258193] p 132 N93-18298

Validity of clinical color vision tests for air traffic control  
specialists  
[AD-A258219] p 123 N93-18301

The Proceedings of the Hypobaric Decompression  
Sickness Workshop  
[AD-A257612] p 123 N93-18362

Space radiation health program plan  
[NASA-TM-108036] p 123 N93-18375

Publications of the Space Physiology and  
Countermeasures Program, Cardiopulmonary Discipline:  
1980-1990  
[NASA-CR-4475] p 123 N93-18376

Role of orientation reference selection in motion  
sickness  
[NASA-CR-191912] p 124 N93-18596

Cardiopulmonary discipline science plan  
[NASA-TM-108040] p 125 N93-19648

An improved anthropometric test device  
p 143 N93-19670

27 years armed forces aerospace pathology and  
toxicology in the Federal Republic of Germany:  
Development, current status, trends and challenges  
p 126 N93-19696

Significance of histological postmortem findings in pilots  
killed in military and civil aircraft accidents in Germany  
(West): A 25-year-review p 126 N93-19697

Medical evaluation of spatial disorientation mishaps  
p 134 N93-19703

Neuroscience discipline science plan  
[NASA-TM-108041] p 128 N93-19882

Regulatory physiology discipline science plan  
[NASA-TM-108038] p 115 N93-19891

Musculoskeletal discipline science plan  
[NASA-TM-108039] p 128 N93-19892

Effect of aerobic capacity on Lower Body Negative  
Pressure (LBNP) tolerance in females  
[NASA-TP-3298] p 128 N93-20318

Physiological responses to wearing the space shuttle  
launch and entry suit and the prototype advanced crew  
escape suit compared to the unsuited condition  
[NASA-TP-3297] p 149 N93-20319

Aerospace medicine and biology: A cumulative index  
to a continuing bibliography (supplement 371)  
[NASA-SP-7011(371)] p 172 N93-20889

Aerospace medicine and biology: A  
bibliography with indexes (supplement 372)  
[NASA-SP-7011(372)] p 172 N93-21044

Guide for aviation medical examiners  
[PB92-219690] p 172 N93-21047

Environmental health discipline science plan  
[NASA-TM-108042] p 173 N93-21369

Space human factors discipline science plan  
[NASA-TM-108023] p 194 N93-21370

Life sciences utilization of Space Station Freedom  
p 205 N93-22622

Life sciences recruitment objectives  
p 205 N93-22623

Biomedical Monitoring and Countermeasures Facility  
p 205 N93-22624

Crew health p 217 N93-22630

Bibliography of the Biosciences Division: 1986 to  
present  
[DCIEM-92-20] p 209 N93-23343

Two techniques for measuring locomotion impact forces  
during zero G  
[NASA-TP-3305] p 217 N93-23410

Tobacco and health of the pilot  
[ETN-93-93693] p 217 N93-23414

Human Factors Issues in Aircraft Maintenance and  
Inspection. Science, technology, and management: A  
program review  
[PB93-146975] p 234 N93-23647

Survey of aviation medical examiners: Information and  
attitudes about the pre-employment and pre-appointment  
drug testing program  
[DOT/FAA/AM-92/15] p 218 N93-24088

Selection of astronauts for European space missions  
p 225 N93-24345

Physiological experiments within the project AustroMir  
p 219 N93-24354

Telescience testbedding for physiological experiments  
under hypobaric hypoxic conditions p 220 N93-24398

An automated method for determining mass properties  
[AD-A259924] p 236 N93-24441

Digest of Russian Space Life Sciences, issue 33  
[NASA-CR-3922(39)] p 244 N93-25195

The prevalence of artificial lens implants in the civil  
airman population  
[DOT/FAA/AM-92/14] p 253 N93-25214

Space biology research development  
[NASA-CR-192830] p 244 N93-25242

- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-022] p 253 N93-25407
- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595
- Simulated sustained flight operations and performance. Part 1: Effects of fatigue p 266 N93-25859
- The use of extended wear contact lenses in the aviation environment: An Army-wide study [AD-A260102] p 266 N93-25859
- [AD-A260938] p 255 N93-26218
- Space Station Freedom biomedical monitoring and countermeasures: Biomedical facility hardware catalog [NASA-CR-193156] p 246 N93-26700
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 373) [NASA-SP-7011(373)] p 256 N93-26945
- Index of international publications in aerospace medicine [AD-A262908] p 284 N93-28306
- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377) [NASA-SP-7011(377)] p 361 N93-31924
- Nutrition, Metabolic Disorders and Lifestyle of Aircrew [AGARD-CP-533] p 367 N93-32240
- Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243
- Protein requirements in hypoxia or hypokinesia p 368 N93-32244
- Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school p 368 N93-32248
- Lipidemic profile of Hellenic Airforce officers p 362 N93-32250
- Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 N93-32253
- Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces p 363 N93-32254
- The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259
- Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 N93-32261
- Survey of smoking habits in the Spanish Air Force p 370 N93-32262
- Health maintenance facility system effectiveness testing [NASA-TM-104737] p 372 N93-32328
- Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 N93-32364
- AEROSPACE SAFETY**
- Beryllium toxicity - An update p 104 A93-20779
- Meeting human needs [AAS PAPER 91-313] p 400 A93-54306
- Occupational ergonomics in space p 68 N93-14013
- Human safety in the lunar environment p 105 N93-16867
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 N93-17971
- Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station [NASA-CR-192015] p 139 N93-17973
- EVA and telerobot interaction p 312 N93-27792
- AEROSPACE SCIENCES**
- Space life sciences overview p 158 N93-21074
- AEROSPACE SYSTEMS**
- Space based robot manipulators - Dynamics of contact and trajectory planning for impact minimization p 135 A93-22827
- Cooperative intelligent robotics in space II: Proceedings of the Meeting, Boston, MA, Nov. 12-14, 1991 [SPIE-1612] p 182 A93-27001
- Characteristics and requirements of robotic manipulators for space operations p 182 A93-27003
- Vision navigator for free-flying robots p 183 A93-27025
- Space Station ECLSS integration analysis [NASA-CR-192470] p 195 N93-22002
- A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever [NASA-CR-193301] p 365 N93-31844

**AEROSPACE TECHNOLOGY TRANSFER**

- Human Factors Issues in Aircraft Maintenance and Inspection. Science, technology, and management: A program review [PB93-146975] p 234 N93-23647

**AFFERENT NERVOUS SYSTEMS**

- Vestibular afferent responses to microrotational stimuli p 328 A93-44930
- Hair cell tufts and afferent innervation of the bullfrog crista ampullaris p 329 A93-44931
- The central nervous connections involved in motion induced emesis p 399 A93-55931

**AGE FACTOR**

- Aging, expertise, and narrative processing p 180 A93-28724
- Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276

**AGE FACTOR**

- Dual-task training strategies and aging [AD-A258261] p 131 N93-18027
- A linear, time-varying simulation of the respiratory tract system [DE93-004515] p 218 N93-24009
- Age 60 Project: Consolidated database experiments [HS-TR-8025-3C(R2)] p 314 N93-27851

**AGING (BIOLOGY)**

- Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training p 37 A93-14970
- A reappraisal of aging and pilot performance p 56 A93-15663
- Conference on Correlations of Aging and Space Effects on Biosystems, Oct. 30-Nov. 1, 1989, Proceedings ... Book p 79 A93-20651
- Posture and the circulation - The age effect p 93 A93-20653
- Age-related bone changes p 93 A93-20655
- Can the adult skeleton recover lost bone? p 93 A93-20656
- The mechanical control system of bone in weightless spaceflight and in aging p 94 A93-20657
- Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658
- Sleep and circadian rhythms p 94 A93-20659
- Altered cell function in microgravity p 79 A93-20660
- The pituitary - Aging and spaceflight rats p 79 A93-20661
- Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662
- Cellular immunosenescence - An overview p 80 A93-20663
- Caenorhabditis elegans - A model system for space biology studies p 80 A93-20665
- Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- An analytical study of the effects of age and experience on flight safety p 176 A93-27158
- Aging, expertise, and narrative processing p 180 A93-28724
- Age and length of service of flight personnel in the case of chronic diseases p 248 A93-35227
- Age-related changes in hemoglobin and erythrocyte levels p 250 A93-35250
- Influence of aging and practice on piloting tasks p 286 A93-39708
- Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321
- AFRRRI reports [AD-A254581] p 49 N93-12649

**AGITATION**

- Response of a mouse hybridoma cell line to heat shock, agitation, and sparging p 328 A93-44928

**AGRICULTURE**

- Active synthetic soil [NASA-CASE-MSC-21954-1-NP] p 114 N93-19054

**AH-64 HELICOPTER**

- Operator workload predictions for the revised AH-64A workload prediction model, volume 1 [AD-A254198] p 30 N93-10261
- Operator workload predictions for the revised AH-64A workload prediction model, Volume 2: Appendixes A through H [AD-A254939] p 63 N93-12545

**AIR**

- The production and use of aeroponically grown inocula of VAM fungi in the native plant nursery [PB92-204973] p 43 N93-15208

**AIR CONDITIONING EQUIPMENT**

- Manned lunar surface site p 316 N93-28033
- Lightweight passive microclimate cooling device [AD-A262262] p 317 N93-28112

**AIR DEFENSE**

- Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 N93-28870

**AIR FILTERS**

- Design of a Shuttle air and water prefilter for reduced gravity operation [SAE PAPER 921161] p 294 A93-41343
- Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters [NASA-TM-108375] p 6 N93-12174
- Evaluation and optimization of a flexible filtration system for respiratory protection system 21 [AD-A262467] p 284 N93-28758

**AIR FLOW**

- Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357] p 307 A93-41516

**AIR LAND INTERACTIONS**

- Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake p 38 A93-16544

**AIR LOCKS**

- Hyperbaric treatment operations aboard Space Station Freedom [SAE PAPER 921142] p 292 A93-41328

**AIR NAVIGATION**

- Methodology for ergonomic tests of the information display on monitor indicators p 101 A93-18530
- Ergonomic aspects of the presentation of piloting-navigation information p 101 A93-18531
- Electronic map interpretation in a dual-task context p 176 A93-27144

**AIR POLLUTION**

- Chemical and toxicological assessment of environmental contaminants in the Lunar-Chemical Analysis Laboratory p 62 A93-17433
- Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms p 101 A93-18418
- Space Shuttle crew compartment debris-contamination [SAE PAPER 921345] p 305 A93-41504

**AIR PURIFICATION**

- Space Shuttle crew compartment debris-contamination [SAE PAPER 921345] p 305 A93-41504
- Shuttle Orbiter Environmental Control and Life Support System - Flight experience [SAE PAPER 921348] p 305 A93-41507
- Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey [SAE PAPER 921350] p 306 A93-41509
- Modeling of membrane processes for air revitalization and water recovery [SAE PAPER 921352] p 306 A93-41511
- Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost p 346 A93-42124
- Regenerative life support technology challenges for the Space Exploration Initiative p 346 A93-42128
- Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- Zero-G life support for Space Station Freedom p 233 N93-22640
- Integrated oxygen recovery system [NASA-CR-192343] p 234 N93-22663
- Integrated oxygen recovery system [NASA-CR-192982] p 267 N93-26088
- Manned lunar surface site p 316 N93-28033

**AIR QUALITY**

- Microbiology operations and facilities aboard restructured Space Station Freedom [SAE PAPER 921213] p 296 A93-41389
- First entry operations for spacecraft [SAE PAPER 921384] p 308 A93-41542
- Survey of protocols for conducting indoor air quality investigations in large buildings [PB93-119865] p 194 N93-21215
- Space life support technology applications to terrestrial environmental problems p 265 N93-25617
- Membrane technology: A search for membranes for submarine atmosphere control [AD-A260581] p 266 N93-25904

**AIR TO AIR MISSILES**

- Predictive nosepointing and flightpath displays for air-to-air combat p 229 A93-30071
- Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853

**AIR TRAFFIC**

- High-speed civil transport - Advanced flight deck challenges [AIAA PAPER 92-4231] p 28 A93-13357

**AIR TRAFFIC CONTROL**

- Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416
- Air Traffic Control facility lighting p 188 A93-27167
- Performance consequences of automation-induced 'complacency' p 286 A93-39571



## SUBJECT INDEX

A new test of scanning and monitoring ability: Methods and initial results p 24 N93-10321  
[AD-A249123]  
Validity of clinical color vision tests for air traffic control specialists p 123 N93-18301  
[AD-A258219]  
A longitudinal examination of applicants to the air traffic control supervisory identification and development program p 257 N93-25213  
[DOT/FAA/AM-92/16]  
Contribution of personality to the prediction of success in initial air traffic control specialist training p 259 N93-26138  
[DOT/FAA/AM-93/4]  
**AIR TRAFFIC CONTROLLERS (PERSONNEL)**  
Poststrike air traffic control trainees - Biodemographic predictors of success in selection and screening p 56 A93-15664  
Psychophysiological stress research - Methodology and results of an investigation involving air traffic controllers [ISBN-3-258-04585-2] p 97 A93-17971  
A systems analysis to identify human factors issues and requirements for data link p 186 A93-27153  
Air Traffic Control facility lighting p 188 A93-27167  
Predicting individual differences in complex skill acquisition - Dynamics of ability determinants p 181 A93-28731  
USAF/USN fixed wing night vision - The mission p 227 A93-30055  
Investigation of hemodynamics and sympatheticoadrenal system activity in air traffic controllers during their work p 247 A93-35209  
Some personality and aptitude characteristics of Air Traffic Control Specialist trainees p 388 A93-52301  
A new test of scanning and monitoring ability: Methods and initial results p 24 N93-10321  
[AD-A249123]  
Validity of clinical color vision tests for air traffic control specialists p 123 N93-18301  
[AD-A258219]  
Stress resistance as a diagnostic category in air traffic controller selection p 219 N93-24092  
[DLR-FB-92-13]  
A longitudinal examination of applicants to the air traffic control supervisory identification and development program p 257 N93-25213  
[DOT/FAA/AM-92/16]  
The air traffic controller's mental model and its implications for equipment design and training selection p 341 N93-30322  
**AIR TRANSPORTATION**  
Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377  
Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775  
Ab initio pilot training process more efficient than traditional methods p 387 A93-49276  
**AIR WATER INTERACTIONS**  
Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate [NASA-CR-193278] p 330 N93-30665  
**AIRCRAFT ACCIDENT INVESTIGATION**  
Errors in aviation maintenance - Taxonomy and control p 175 A93-27135  
Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142  
Response to automated function failure cue - An operational measure of complacency p 176 A93-27147  
An analytical study of the effects of age and experience on flight safety p 176 A93-27158  
Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660  
Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663  
Computer aided methods for simulating occupant response to impact using OASYS DYNA3D p 142 N93-19666  
Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991 p 133 N93-19679  
Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681  
Cognitive factors in the air events of the Air Force during the last decade p 134 N93-19682  
Toxicological investigations of flight accidents: Findings and methods p 126 N93-19695  
27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696  
Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697  
Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 N93-19698  
Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 N93-19709  
**AIRCRAFT ACCIDENTS**  
Human factors in the 'glass cockpit' p 27 A93-11202  
Army cockpit dealthalization program p 61 A93-15419  
The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989 p 118 A93-25201  
The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202  
The influence of flight experience on midair collision risk perception p 180 A93-28707  
'And we were tired' fatigue and aircrew errors p 264 A93-37070  
Analysis of injuries following the crash of Avianca Flight 52 p 382 A93-49562  
Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308  
Mishap trends and cause factors in naval aviation - A review of Naval Safety Center data, 1986-90 p 405 A93-55166  
The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident [AD-A254550] p 49 N93-12612  
Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660  
Occupant kinematics simulation of the Kegworth air accident p 142 N93-19662  
Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663  
Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664  
Occupant simulation as an aspect of flight safety research p 142 N93-19665  
Computer aided methods for simulating occupant response to impact using OASYS DYNA3D p 142 N93-19666  
Design/development of an enhanced biodynamic manikin p 142 N93-19667  
Improving manikin biofidelity p 142 N93-19668  
An improved anthropometric test device p 143 N93-19670  
Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991 p 133 N93-19679  
Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681  
Cognitive factors in the air events of the Air Force during the last decade p 134 N93-19682  
Fires on board aircraft: Toxicological risk in flight p 126 N93-19694  
Toxicological investigations of flight accidents: Findings and methods p 126 N93-19695  
27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696  
Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697  
Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 N93-19698  
An epidemiological study in SAF's pilots ejections p 143 N93-19699  
The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704  
Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 N93-19709  
Effectiveness of birthdate biorhythm theory on flight accidents p 127 N93-19710  
Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations [DOT/FAA/AM-93/8] p 283 N93-27158  
Age 60 Project: Consolidated database experiments (HS-TR-8025-3C(R2)) p 314 N93-27851  
An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 N93-29888  
**AIRCRAFT CARRIERS**  
The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm [AD-A258156] p 132 N93-18294  
**AIRCRAFT COMPARTMENTS**  
On cockpit (crew) resource management p 223 A93-31490

## AIRCRAFT MAINTENANCE

**AIRCRAFT CONFIGURATIONS**  
Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 N93-17697  
**AIRCRAFT CONTROL**  
Training for avionics evaluation p 24 A93-11254  
[AIAA PAPER 92-4068]  
A study of decision making and performance in rejected takeoffs p 287 A93-41322  
[SAE PAPER 921134]  
A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object p 364 A93-45685  
Distribution of functions in a man-machine control system of a certain type p 364 A93-45687  
What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment [AIAA PAPER 93-3561] p 406 A93-52661  
Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts p 64 A93-12860  
[AD-A254381]  
Principles for integrating voice I/O in a complex interface p 146 N93-19774  
A systems approach to the advanced aircraft man-machine interface p 146 N93-19776  
**AIRCRAFT DESIGN**  
Training for avionics evaluation p 24 A93-11254  
[AIAA PAPER 92-4068]  
High-speed civil transport - Advanced flight deck challenges p 28 A93-13357  
[AIAA PAPER 92-4231]  
Industrial design influence on today's flight decks p 61 A93-14378  
**AIRCRAFT EQUIPMENT**  
Contact lenses in aviation - The Marine Corps experience p 289 A93-41172  
New technologies for in-flight pasteless bioelectrodes p 289 A93-41174  
Hybrid oxygen system [AD-A262417] p 317 N93-28464  
The design and development of the new RAF standard HUD format p 318 N93-28856  
**AIRCRAFT GUIDANCE**  
Head-steered sensor flight test results and implications p 318 N93-28859  
The quest for an integrated flying helmet p 319 N93-28860  
Human capabilities and limitations in situation awareness p 319 N93-28863  
**AIRCRAFT HAZARDS**  
Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142  
**AIRCRAFT INDUSTRY**  
Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776  
Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study p 216 A93-32786  
**AIRCRAFT INSTRUMENTS**  
Human factors in the 'glass cockpit' p 27 A93-11202  
Head-up display standardization and the utility of analog vertical velocity information during instrument flight p 189 A93-27451  
Instrument-approach-plate design considerations for displaying radio frequencies p 289 A93-39574  
Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 N93-15968  
Equipment, more or less ready to be used in helicopters p 148 N93-19785  
The design and development of the new RAF standard HUD format p 318 N93-28856  
Cognitive interface considerations for intelligent cockpits p 319 N93-28865  
**AIRCRAFT LANDING**  
Transfer effects of scene content and crosswind in landing instruction p 62 A93-15665  
What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment [AIAA PAPER 93-3561] p 406 A93-52661  
Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857  
**AIRCRAFT LIGHTS**  
Validity of clinical color vision tests for air traffic control specialists p 123 N93-18301  
[AD-A258219]  
**AIRCRAFT MAINTENANCE**  
Errors in aviation maintenance - Taxonomy and control p 175 A93-27135  
Human Factors Issues in Aircraft Maintenance and Inspection. Science, technology, and management: A program review [PB93-146975] p 234 N93-23647

- Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data  
[AD-A259684] p 234 N93-23660
- Human Factors in Aviation Maintenance, phase 2  
[DOT/FAA/AM-93/5] p 267 N93-26089
- AIRCRAFT MANEUVERS**
- What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment  
[AIAA PAPER 93-3561] p 406 A93-52661
- The design and development of the new RAF standard HUD format p 318 N93-28856
- AIRCRAFT MODELS**
- Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H  
[AD-A254939] p 63 N93-12545
- AIRCRAFT NOISE**
- The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555
- The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556
- AIRCRAFT PILOTS**
- The optimum design of personal liquid cooling system p 60 A93-14314
- Industrial design influence on today's flight decks p 61 A93-14378
- Study of overall analysis method of the man-machine-environment systems p 61 A93-14413
- Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173
- The pigmentary dispersion disorder in USAF aviators p 87 A93-18033
- Myocardial infarction occurring at the conclusion of centrifuge training in a 37-year-old aviator p 89 A93-18044
- Evaluation of the efficiency of the pilot's control activity in a flight simulator p 100 A93-18347
- Safety concerns as a factor in pilot desire to change aircraft p 129 A93-24040
- Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus p 130 A93-25209
- Up/down in (im)possible flight attitude indicators - Some effects of colour, shape and pattern p 185 A93-27128
- A systems analysis to identify human factors issues and requirements for data link p 186 A93-27153
- An analytical study of the effects of age and experience on flight safety p 176 A93-27158
- Individual differences in airline captains' personalities, communication strategies, and crew performance p 177 A93-27175
- Comparing the Cattell 16PF profiles of male and female commercial airline pilots p 178 A93-27177
- Cases from the aerospace medicine resident's teaching file: Case No.51 - Hypercholesterolemia and heme positive stools in a 69-year-old aviator (clinical conference) p 165 A93-28702
- Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729
- Assessing pilot workload - Why measure heart rate, HRV and respiration? p 168 A93-28741
- Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065
- Advances in miniature projection CRTs for helmet displays p 229 A93-30066
- Evaluation of conforal and body-axis attitude information for spatial awareness p 229 A93-30070
- Retroperitoneal fibrosis as a cause of hypertension in an aviator - A case report p 212 A93-30284
- Adaptation of young pilots to new conditions of their work (Social-psychological aspects) p 256 A93-35220
- Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249
- Age-related changes in hemoglobin and erythrocyte levels p 250 A93-35250
- Psychosomatic status and flying skill during geomagnetic disturbances p 257 A93-35251
- Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499
- Structural and cytochemical signs of the development of deadaptation, as determined from blood characteristics p 252 A93-36724
- Influence of aging and practice on piloting tasks p 286 A93-39708
- Contact lenses in aviation - The Marine Corps experience p 289 A93-41172
- Prevalence of corrective lens wear in Royal Australian Air Force flight crews p 289 A93-41173
- Respiration curves as an index of pilot workload p 332 A93-45320
- Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321
- A computer simulation model for attention distribution and event generation p 340 A93-45323
- The effects of history and predictive information on the ability of the transport aircraft pilot to predict an alert p 365 A93-46810
- Determinants of  $\gamma$  Gz-related neck pain - A preliminary survey p 380 A93-49227
- Back ache in helicopter pilots p 382 A93-49566
- High level organizing principles for display of systems fault information for commercial flight crews p 388 A93-52187
- Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high  $\gamma$  Gz forces p 384 A93-52298
- The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299
- Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine p 402 A93-55332
- Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333
- Operator workload predictions for the revised AH-64A workload prediction model, volume 1  
[AD-A254198] p 30 N93-10261
- Relating cognitive function to military aviator performance in early HIV infection p 17 N93-11298
- The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312
- In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automated enzyme immunoassay method to dose specific IgE p 21 N93-11314
- Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF) p 21 N93-11316
- Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317
- Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles  
[AD-A254983] p 35 N93-12508
- Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H  
[AD-A254939] p 63 N93-12545
- Human factors research in aircrew performance and training: 1986-1991  
[AD-A254455] p 63 N93-12609
- Development of measures of crew coordination  
[AD-A255384] p 70 N93-14651
- Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary  
[AD-A257016] p 99 N93-16189
- Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 N93-17817
- The detection of lateral motion by US Navy jet pilots  
[AD-A258115] p 120 N93-17896
- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm  
[AD-A258146] p 122 N93-18292
- The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm  
[AD-A258156] p 132 N93-18294
- A study of illness related lost time in transport aircraft crewmembers  
[AD-A258193] p 132 N93-18298
- Medical evaluation of spatial disorientation mishaps  
[AD-A257016] p 134 N93-19703
- The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704
- Modeling the dynamics of mental workload and human performance in complex systems p 135 N93-19956
- Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment  
[AD-A258502] p 129 N93-20400
- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm  
[AD-A259243] p 171 N93-20580
- In-flight field-of-view with ANVIS  
[AD-A259905] p 235 N93-23992
- Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment  
[AD-A259909] p 235 N93-23995
- The five-factor personality model and naval aviation candidates  
[AD-A260227] p 225 N93-24319
- Human visual limitations on suprathreshold contrast perception through ANVIS  
[AD-A259970] p 226 N93-24431
- Simulated sustained flight operations and performance. Part 1: Effects of fatigue  
[AD-A261012] p 266 N93-25859
- The use of extended wear contact lenses in the aviation environment: An Army-wide study  
[AD-A260938] p 255 N93-26218
- Age 60 Project: Consolidated database experiments  
[HS-TR-8025-3C(R2)] p 314 N93-27851
- Head-steered sensor flight test results and implications p 318 N93-28859
- The quest for an integrated flying helmet p 319 N93-28860
- The physiological limitations of man in the high G environment p 319 N93-28861
- Field test of a computer-driven tool to measure psychological characteristics of aircrew  
[AD-A264484] p 341 N93-30425
- Abridged procedural guide to aircrew anthropometric accommodation assessment  
[AD-A265220] p 366 N93-32006
- Application and validation of workload assessment techniques  
[AD-A264575] p 366 N93-32012
- Nutritional assessment of United States tactical air command pilots p 367 N93-32242
- The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas p 369 N93-32257
- The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259
- Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 N93-32261
- The effects of cockpit heat on aviator sleep parameters p 371 N93-32266
- AIRCRAFT SAFETY**
- Safety concerns as a factor in pilot desire to change aircraft p 129 A93-24040
- The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202
- Mishap trends and cause factors in naval aviation - A review of Naval Safety Center data, 1986-90 p 405 A93-55166
- An epidemiological study in SAF's pilots ejections p 143 N93-19699
- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm  
[AD-A259243] p 171 N93-20580
- AIRDROPS**
- Relating flying hours to aircrew performance: Evidence for attack and transport missions  
[AD-A253988] p 25 N93-10719
- AIRFRAMES**
- Training for avionics evaluation  
[AIAA PAPER 92-4068] p 24 A93-11254
- AIRLINE OPERATIONS**
- Individual differences in airline captains' personalities, communication strategies, and crew performance p 177 A93-27175
- Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499
- Flight crew sleep during multiple layover polar flights p 380 A93-49226
- Ab initio pilot training process more efficient than traditional methods p 387 A93-49276
- Control of infection in an international airline p 407 A93-52867
- Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary  
[AD-A257016] p 99 N93-16189
- Human Factors Issues in Aircraft Maintenance and Inspection, Science, technology, and management: A program review  
[PB93-146975] p 234 N93-23647
- AIRPORT SECURITY**
- Recognition of partially occluded threat objects using the annealed Hopfield network p 142 N93-19466
- ALANINE**
- Alanine increases blood pressure during hypotension p 203 A93-33027
- ALBUMINS**
- Atomic structure and chemistry of human serum albumin p 200 A93-31628
- Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] p 276 N93-28952
- ALCOHOLS**
- Smoking status and body composition, exercise, dietary intake, and alcohol/coffee consumption  
[AD-A250648] p 23 N93-11893

- Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 N93-19683
- ALDOSTERONE**  
Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 N93-12014
- ALERTNESS**  
Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377  
Identification of hazardous awareness states in monitoring environments p 287 A93-41324  
Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots p 401 A93-55163  
The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness p 283 N93-27923  
Method of encouraging attention by correlating video game difficulty with attention level p 288 N93-28128  
[NASA-CASE-LAR-15022-1] Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267
- ALGAE**  
Algae and oxygen in earth's ancient atmosphere p 153 A93-27800  
Influence of space-flight factors on growth of spirulina p 199 A93-30441  
Two circadian oscillators in one cell p 239 A93-34518  
Process for selectively recovering algae and protozoa [NASA-CASE-MFS-26124-1-NPO] p 276 N93-29174  
Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate [NASA-CR-193278] p 330 N93-30665
- ALGEBRA**  
A weighted iterative algorithm for neuromagnetic imaging [DE92-040244] p 51 N93-13522
- ALGORITHMS**  
Eye movements and visual information processing [AD-A250198] p 24 N93-10278  
A weighted iterative algorithm for neuromagnetic imaging [DE92-040244] p 51 N93-13522  
The perception of articulated motion: Recognizing moving light displays [AD-A256046] p 59 N93-14660  
Transcutaneous Analyte Measuring Methods (TAMM), phase 2 [AD-A256327] p 54 N93-15192  
Automatic detection of seizures with applications p 254 N93-25592  
Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764  
An algorithm for simple and complex feature detection: From retina to primary visual cortex [AD-A264306] p 337 N93-30897
- ALLERGIC DISEASES**  
Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776  
Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 N93-11283  
Immunological parameters in current and former US Air Force personnel p 16 N93-11295  
Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine p 20 N93-11311  
The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312  
Phadiatop: A screening test for inhalant allergy p 21 N93-11313  
In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automated enzyme immunoassay method to dose specific IgE p 21 N93-11314  
Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF) p 21 N93-11316  
Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317
- ALPHANUMERIC CHARACTERS**  
Display format and highlight validity effects on search performance using complex visual displays p 187 A93-27160
- ALTIMETERS**  
Head-up display standardization and the utility of analog vertical velocity information during instrument flight p 189 A93-27451
- ALTITUDE ACCLIMATIZATION**  
Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028
- Protein absorption and energy digestibility at high altitude p 115 A93-21683  
Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685  
Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255  
Interactions between Hb, Mg, DPG, ATP, and Cl determine the change in Hb-O2 affinity at high altitude p 279 A93-41117  
Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191  
Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude p 326 A93-44181  
Changes in the phospholipid and cholesterol content of rat tissues during adaptation to high altitude at different environmental temperatures p 358 A93-47100  
Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569  
Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574  
Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115  
Beta-adrenergic blockade and lactate metabolism during exercise at high altitude [AD-A263544] p 334 N93-29820  
Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge [AD-A264260] p 337 N93-30894
- ALTITUDE CONTROL**  
Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004  
Perception/action: An holistic approach [AD-A259597] p 235 N93-24067
- ALTITUDE SICKNESS**  
The influence of prior exercise at anaerobic threshold on decompression sickness p 8 A93-10333  
Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153  
High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709  
Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713  
Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125  
Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186  
Does drinking protect against mountain sickness? p 382 A93-49565  
The Environmental Symptoms Questionnaire (ESO): Development and application [AD-A264127] p 335 N93-30196
- ALTITUDE SIMULATION**  
Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043  
Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281
- ALTITUDE TOLERANCE**  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042  
Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043  
Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281  
Altitude stress and cosmonaut training p 262 A93-35235  
Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255
- ALVEOLI**  
Time course of functional repair of the alveolar epithelium after hyperoxic injury p 78 A93-20032  
The chronic effects of jP-8 jet fuel exposure on the lungs [AD-A264162] p 334 N93-30153
- AMBIENT TEMPERATURE**  
The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172  
Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074
- Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49218  
The relationship between environmental conditions and UH-60 cockpit temperature [AD-A255918] p 69 N93-14090  
Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress [AD-A258552] p 148 N93-19955
- AMINES**  
Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697  
Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis [AD-A255582] p 95 N93-16041  
Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 N93-16166
- AMINO ACIDS**  
Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442  
Detection of genetic effects of excess near-ultraviolet irradiation under exobiology conditions p 39 A93-17446  
The evolution of aminoacyl-tRNA synthetases, the biosynthetic pathways of amino acids and the genetic code p 73 A93-17825  
Comet impacts and chemical evolution on the bombarded earth p 109 A93-17980  
Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048  
Differential effects of insulin resistance on leucine and glucose kinetics in obesity p 152 A93-27224  
A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918  
Nucleotide-protectable labeling of sulphydryl groups in subunit I of the ATPase from Halobacterium saccharovorum p 201 A93-32116  
Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate p 214 A93-32120  
Effects of dietary amino acids, carbohydrates, and choline on neurotransmitter synthesis p 204 A93-33031  
Some proteins keep 'living fossil' pre-sequence p 244 A93-36562  
On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791  
Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792  
Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793  
Relationship between G + C in silent sites of codons and amino acid composition of human proteins p 358 A93-47099  
Kinetics of peptide hydrolysis and amino acid decomposition at high temperature --- space biochemical evolution p 411 A93-53289  
Comment on 'Summary and implications of reported amino acid concentrations in the Murchison meteorite' by E. L. Shock and M. D. Schulte p 412 A93-53294  
A model for the prebiotic synthesis of peptides which throws light on the origin of the genetic code and the observed chirality of life p 412 A93-56000  
Amino acid sequences for the binding regions in serum albumin proteins [NASA-CASE-MFS-28402-1] p 276 N93-28952  
Spontaneous regulating mechanisms that may have led to the origin of life [DE93-603677] p 331 N93-31161
- AMMONIA**  
On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791  
Hydrothermal organic synthesis experiments [NASA-CR-191257] p 41 N93-13457
- AMMONIUM NITRATES**  
Development of the nitrogen fixation system for CELSS [SAE PAPER 921238] p 297 A93-41411
- AMPHETAMINES**  
Pharmacological countermeasures against motion sickness p 404 A93-55945  
Effects of dextromethamphetamine on subjective fatigue [AD-A258252] p 119 N93-17822
- AMPHIBIA**  
Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745



## AMPLITUDE MODULATION

Altering the position of the first horizontal cleavage furrow of the amphibian (*Xenopus*) egg reduces embryonic survival p 272 A93-39717

### AMPLITUDE MODULATION

Auditory spectro-temporal pattern analysis [AD-A264691] p 361 N93-31981

### ANAEROBES

Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280  
Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems [SAE PAPER 921272] p 301 A93-41442  
Biological conversion of synthesis gas [DE92-017673] p 40 N93-13269  
Molecular biology of anaerobic aromatic biodegradation [AD-A255213] p 42 N93-13863

### ANALOG CIRCUITS

Silicon neuron [AD-A255091] p 50 N93-12756

### ANATOMY

Proceedings of Workshop 1: The Human Brainmap Database [AD-A260720] p 258 N93-25654  
Anatomy and physiology of plant conductive systems [PB93-156032] p 245 N93-25877

### ANEMIAS

Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972  
Fundamental diagnostic hematology: Anemia (second edition) [PB93-188662] p 338 N93-31140

### ANGIOGRAPHY

Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 N93-32253

### ANGLE OF ATTACK

Predictive nosepointing and flightpath displays for air-to-air combat p 229 A93-30071

### ANGLES (GEOMETRY)

The effect of variable seat back angles on human response to 1 Gz impact accelerations [AD-A250673] p 31 N93-11559

### ANGULAR VELOCITY

Factors influencing perceived angular velocity p 97 A93-17800  
Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 N93-12211  
Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857

### ANIMALS

Revision of the Wind River faunas, early Eocene of central Wyoming. X - Bunophorus (Mammalia, Artiodactyla) p 203 A93-33026  
Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146  
Scaling issues for biodiversity protection [DE92-016689] p 6 N93-12315  
An overview of gravitational physiology [NASA-TM-102849] p 35 N93-12319  
Environmental health discipline science plan [NASA-TM-108042] p 173 N93-21369  
CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 N93-24401  
Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 N93-30594

### ANIMATION

Influence of animation on dynamical judgments p 98 A93-20275  
Influence of animation on dynamical judgments p 180 A93-28692

### ANISOTROPY

Anisotropy in an ambiguous kinetic depth effect p 55 A93-14097

### ANNOTATIONS

An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine [AD-A265497] p 360 N93-31917

### ANNUAL VARIATIONS

Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronectin p 47 A93-16157

### ANOXIA

Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697

### ANTARCTIC REGIONS

Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877

### Epidemiologic research in Antarctica

p 81 N93-16800  
Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments p 99 N93-16801  
NASA/NSF Antarctic Science Working Group p 81 N93-16802  
NASA/NSF Workshop on Antarctic Research p 81 N93-16803  
Immunology presentation at the 1990 NASA/NSF Antarctica Biomedical Science Working Group p 81 N93-16806

### ANTENNA ARRAYS

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 N93-15825

### ANTENNA DESIGN

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 N93-15825  
Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191807] p 110 N93-16709

### ANTHROPOLOGY

Space migrations: Anthropology and the humanization of space p 105 N93-16862

### ANTHROPOMETRY

Anthropometry for HMD design --- using three-dimensional quantitative morphology p 229 A93-30069  
Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers [NASA-CR-185679] p 34 N93-12195  
Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 N93-12211  
Human perceptual deficits as factors in computer interface test and evaluation [DE92-019124] p 63 N93-12712  
A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population [NASA-TP-3286] p 96 N93-16619  
The design and use of automotive crash test dummies p 142 N93-19669  
An improved anthropometric test device p 143 N93-19670

Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988 [AD-A260869] p 265 N93-25628  
Anthropometry of the foot and lower leg of U.S. Army soldiers: Fort Jackson, SC [AD-A261405] p 268 N93-26404  
Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system [NASA-TM-104769] p 321 N93-29044  
Anthropometric survey of the astronaut applicants and astronauts from 1985 to 1991 [NASA-RP-1304] p 321 N93-29324  
Methods for characterizing the human head for the design of helmets [AD-A263875] p 353 N93-29889  
An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine [AD-A265497] p 360 N93-31917  
Abridged procedural guide to aircrew anthropometric accommodation assessment [AD-A265220] p 366 N93-32006  
Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 N93-32256

### ANTIADRENERGICS

Xylazine emesis, yohimbine and motion sickness susceptibility in the cat p 324 A93-42450  
Beta-adrenergic blockade and lactate metabolism during exercise at high altitude [AD-A263544] p 334 N93-29820

### ANTIBIOTICS

Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390

### ANTIBODIES

Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type p 153 A93-28698  
Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 A93-32850  
Some indices of humoral immunity in Rhesus monkeys under the effect of extreme space flight factors p 241 A93-35258  
Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292

Silent HIV infection p 16 N93-11293  
Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297  
Susceptibility in USAF recruits to vaccine preventable diseases p 18 N93-11301  
Measuring the metastatic potential of cancer cells p 244 N93-25566  
Primary events in olfactory reception [AD-A260562] p 255 N93-25944  
Pseudomonas screening assay [NASA-CASE-NPO-17653-1-CU] p 245 N93-25994  
Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 N93-29620

### ANTICHOLINERGICS

Idaverine, an M2- vs. M3-selective muscarinic antagonist, does not prevent motion sickness in cats p 327 A93-44878

### ANTICONVULSANTS

Autoradiographic distribution and applied pharmacological characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs [AD-A255607] p 54 N93-15009

### ANTIIDIURETICS

Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 N93-12014

### ANTIDOTES

Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots p 7 A93-10326

### ANTIEMETICS AND ANTINAUSEANTS

Buspirone blocks cisplatin-induced emesis in cats p 324 A93-42668  
Applied chemical engineering thermodynamics [ISBN 0-387-54759-2] p 357 A93-46075

### ANTIFOULING

Biofilm ecology of bioluminescent bacteria [AD-A255282] p 42 N93-14532

### ANTIGENS

Silent HIV infection p 16 N93-11293  
Immunological parameters in current and former US Air Force personnel p 16 N93-11295  
Early markers of HIV infection and subclinical disease progression p 17 N93-11296  
Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308  
Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171 p 20 N93-11309

### ANTIHISTAMINICS

The effects of Benadryl and Hismanal on mood, physiological measures, antihistamine detection, and subjective symptoms p 385 A93-52302  
The effects of Benadryl and Hismanal on psychomotor performance and perceived performance p 385 A93-52303

Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator [AD-A258012] p 119 N93-17817

### ANTINFECTIVES AND ANTIBACTERIALS

Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388  
Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305  
Rapid susceptibility testing of *Mycobacterium avium* complex and *Mycobacterium tuberculosis* isolated from AIDS patients [NASA-CR-192382] p 172 N93-20736

### ANTIOXIDANTS

Lipid peroxidation and the antioxidant defense system in rats after a 13-day flight on the Cosmos-1887 biosatellite p 239 A93-35210  
Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

### ANTISEPTICS

Aseptic technique in microgravity p 168 A93-28737  
Regenerable biocide delivery unit, volume 1 [NASA-CR-185701-VOL-1] p 274 A93-27122

### ANXIETY

An assessment of Turkish Air Force pilots' anxiety and depression levels p 23 A93-10334  
Assessing for preflight predictors of airsickness p 8 A93-10335

### AORTA

Study of the relationship between therapeutic effects and control parameters of ECP using a simulation method p 11 A93-13716

## SUBJECT INDEX

**APERTURES**

- A fiber optic probe for the detection of cataracts  
p 254 N93-25593

**APPLICATIONS PROGRAMS (COMPUTERS)**

- Application of RADTRAN to estimation of doses to persons in enclosed spaces  
[DE93-000758] p 97 N93-17230
- Space life support engineering program  
[NASA-CR-192188] p 141 N93-19039
- Microcomputer based software for biodynamic simulation  
p 196 N93-22191

**APPROACH**

- The effect of geometric field of view and tunnel design for perspective flight-path displays  
[SAE PAPER 921131] p 291 A93-41319

**APPROACH CONTROL**

- Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions  
[AIAA PAPER 92-4233] p 28 A93-13331

**APTITUDE**

- Predicting individual differences in complex skill acquisition - Dynamics of ability determinants  
p 181 A93-28731
- The unique contribution of selected personality tests to the prediction of success in naval pilot training  
[AD-A258144] p 132 N93-18291

**AQUATIC PLANTS**

- Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake  
p 38 A93-16544
- CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station  
p 210 N93-24401

**AQUEOUS SOLUTIONS**

- On the reaction of 2-aminopropionitrile in aqueous media  
p 354 A93-43791
- Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu  
p 354 A93-43793
- Hydrothermal dehydration of aqueous organic compounds  
p 397 A93-53291

**AQUIFERS**

- Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents  
[AD-A255696] p 42 N93-14557

**ARCHAEBACTERIA**

- Modern life at high temperatures --- evolution and taxonomy of extreme-thermophilic bacteria  
p 74 A93-18003
- Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments  
p 80 A93-20672
- Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from *Halobacterium saccharovorum*  
p 201 A93-32116
- Chloroflexus aurantiacus and ultraviolet radiation - Implications for Archean shallow-water stromatolites  
p 400 A93-55999

**ARCHITECTURE**

- Lunar habitats - Places for people  
p 344 A93-41991
- Lunar base requirements for human habitability  
p 345 A93-41995
- Preliminary design study of lunar housing configurations  
p 106 N93-17443
- Evolving concepts of lunar architecture: The potential of subelene development  
p 107 N93-17447
- Mars habitat  
p 352 N93-29747
- Selenia: A habitability study for the development of a third generation lunar base  
p 352 N93-29748

**ARCHITECTURE (COMPUTERS)**

- An overview of the dynamic predictive architecture for robotic assistants  
p 191 A93-29112
- Person-like intelligent systems architectures for robotic shared control and automated operations  
p 191 A93-29113
- An operational evaluation process for long-duration mission habitats in space  
p 345 A93-42114
- A manipulator control testbed - Implementation and applications  
[AAS PAPER 92-054] p 392 A93-50594
- Optimizing dynamic transparency in teleoperator architectures  
[AAS PAPER 92-056] p 392 A93-50596
- The perception of articulated motion: Recognizing moving light displays  
[AD-A256046] p 59 N93-14660
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies  
[AGARD-CP-520] p 317 N93-28850

**ARCTIC REGIONS**

- Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments  
p 99 N93-16801

**ARGON**

- Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns)  
p 216 A93-32784

**ARM (ANATOMY)**

- Decrement in manual arm performance during whole body cooling  
p 88 A93-18038
- Gravitoinertial force level affects the appreciation of limb position during muscle vibration  
p 169 A93-28744
- Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] p 70 N93-14870
- Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] p 106 N93-17087
- Aimed arm movements under changed gravity  
p 193 N93-21113

**ARMED FORCES**

- Recent developments in U.S. Air Force pilot candidate selection and classification  
p 97 A93-18046
- 27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges  
p 126 N93-19696

**ARMED FORCES (FOREIGN)**

- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination  
p 18 N93-11303

**ARMED FORCES (UNITED STATES)**

- Viral hepatitis in the US Air Force, 1980 - 1989  
p 15 N93-11287
- Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force  
p 16 N93-11292
- Immunological parameters in current and former US Air Force personnel  
p 16 N93-11295
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function  
p 18 N93-11299
- Susceptibility in USAF recruits to vaccine preventable diseases  
p 18 N93-11301
- Introduction to training decisions modeling technologies: The training decisions system  
[AD-A249862] p 27 N93-12252
- A paradigm shift in Air Force medicine  
[AD-A258334] p 121 N93-18159
- Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988  
[AD-A260869] p 265 N93-25628
- United States Army space experiment 601  
[AD-A261460] p 260 N93-26353

**AROMATIC COMPOUNDS**

- Laboratory simulation of organic grain mantles  
p 268 A93-36554
- Molecular biology of anaerobic aromatic biodegradation  
[AD-A255213] p 42 N93-13863

**AROUSAL**

- Predicting individual differences in complex skill acquisition - Dynamics of ability determinants  
p 181 A93-28731
- Assessing pilot workload - Why measure heart rate, HRV and respiration?  
p 168 A93-28741
- Physiological analyses of the afferents controlling brain neurochemical systems  
[AD-A25185] p 14 N93-11146
- The role of central monoaminergic systems in arousal and selective attention  
[AD-A258500] p 122 N93-18264

**ARRHYTHMIA**

- The rhythm of heart activity and arrhythmia in long-term space flights  
p 119 A93-25652
- Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers  
p 168 A93-28739
- Carbon monoxide exposure of subjects with documented cardiac arrhythmias  
[PB93-179943] p 337 N93-30890

**ARTERIES**

- Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia  
p 76 A93-18295
- Influence of ten-day head-down bedrest on human carotid baroreceptor-cardiac reflex function  
p 161 A93-28678

**ARTERIOSCLEROSIS**

- Wall shear stress estimates in coronary artery constrictions  
p 170 A93-28759
- Cardiovascular risk factors in an Italian Air Force population: Preliminary report  
p 362 N93-32252

**ARTIFICIAL CARDIAC PACEMAKER**

- Cardiac pacing and aviation  
p 215 A93-32778

**ARTIFICIAL GRAVITY**

- Artificial gravity augmentation on the moon and Mars  
p 346 A93-42127
- Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge  
p 379 A93-49178
- Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report  
p 375 A93-49206
- Centrifuges - Their development and use in gravitational biology  
p 376 A93-49210
- Centrifuges - Evolution of their uses in plant gravitational biology and new directions for research on the ground and in spaceflight  
p 376 A93-49211

**ARTIFICIAL INTELLIGENCE**

- Cooperative intelligent robotics in space II; Proceedings of the Meeting, Boston, MA, Nov. 12-14, 1991  
[SPIE-1612] p 182 A93-27001
- Intelligent robotics capabilities of the teleautonomy testbed  
p 184 A93-27035
- Human-centered automation and AI - Ideas, insights, and issues from the Intelligent Cockpit Aids research effort  
p 407 A93-52764
- Ontology of mind, subjective ontology, and the example of temporal expressions  
[REPT-92-018] p 26 N93-11212
- From pilot's associate to satellite controller's associate  
p 32 N93-11922
- The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork  
[AD-A256192] p 69 N93-14520
- A voyage to Mars: A challenge to collaboration between man and machines  
p 70 N93-14614
- A monitoring and control system for complex man-machine systems: Preliminary design  
p 70 N93-14951
- Adaptive autonomous target cuer  
p 148 N93-19784
- Analysis and synthesis of adaptive neural elements and assemblies  
[AD-A259954] p 219 N93-24247
- Neural basis of motion perception  
[AD-A261452] p 260 N93-26349
- Operator and automation capability analysis: Picking the right team  
p 319 N93-28864
- Cognitive interface considerations for intelligent cockpits  
p 319 N93-28865

**ARTILLERY**

- Effect of protective clothing ensembles on artillery battery crew performance  
[AD-A254327] p 64 N93-12960

**ARTILLERY FIRE**

- Effect of protective clothing ensembles on artillery battery crew performance  
[AD-A254327] p 64 N93-12960

**ASCORBIC ACID**

- Investigation of laser-induced retinal damage  
[AD-A264096] p 338 N93-31094

**ASSAYING**

- Methods development for total organic carbon accountability  
[NASA-CR-184438] p 40 N93-12949
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] p 82 N93-17049
- Pseudomonas screening assay  
[NASA-CASE-NPO-17653-1-CU] p 245 N93-25994

**ASSESSMENTS**

- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN)  
p 258 N93-25595

**ASTEROIDS**

- The fate of organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite  
p 110 A93-17984

**ASTHENOPIA**

- Motion sickness and oculomotor systems in virtual environments  
p 381 A93-49400

**ASTHMA**

- Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine  
p 20 N93-11311
- The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting  
p 21 N93-11312
- Phadiatop: A screening test for inhalant allergy  
p 21 N93-11313
- In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automated enzyme immunoassay method to dose specific IgE  
p 21 N93-11314
- Asthma in aircrew: Assessment, treatment and disposition  
p 21 N93-11315
- Allergic and nonallergic rhinitis in Greek pilots  
p 21 N93-11317

**ASTRONAUT LOCOMOTION**

- A study to explore locomotion patterns in partial gravity environments  
[SAE PAPER 921157] p 293 A93-41340
- An analysis of human performance in simulated partial-gravity environments p 347 A93-42173
- Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406

**ASTRONAUT PERFORMANCE**

- Formation of the hypokinetic syndrome in the digestive system under conditions of weightlessness p 119 A93-25600
- Space and cognition - The measurement of behavioral functions during a 6-day space mission p 405 A93-55164

**ASTRONAUT TRAINING**

- The training of the new astronaut candidates at EAC p 129 A93-23693
- Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155
- Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188
- European astronaut candidates in training in the CIS p 256 A93-34593
- Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255
- NASA Specialized Center for Research and Training (NSCORT) in space environmental health [SAE PAPER 921358] p 307 A93-41517
- User evaluation of a stereoscopic display for space training applications p 408 A93-53123
- The European astronauts training programme p 226 A93-24346
- Mir 1992 operations and crew training p 226 A93-24352
- Development and implementation of the MotoMir experiment on the Mir Space Station p 220 A93-24363
- Background and objectives of the PARAT program p 343 A93-31230

**ASTRONAUTS**

- A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935
- Contribution of psychiatry to life in space p 56 A93-15529
- Effect of hypergravity on astronauts in space flight p 48 A93-16254
- A new generation of astronauts in space - The astronaut selection process p 57 A93-17071
- Method of selection of astronauts cardiovascular regulatory function under simulated weightlessness p 91 A93-19995
- Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space p 130 A93-25207
- Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780
- Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783
- Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254
- A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population [NASA-TP-3286] p 96 A93-16619
- Design of a resistive exercise device for use on the Space Shuttle [NASA-CR-192079] p 108 A93-17805
- Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station [NASA-CR-192015] p 139 A93-17973
- Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 A93-18156
- TALON and CRADLE: Systems for the rescue of tumbling spacecraft and astronauts p 196 A93-22268
- Selection of astronauts for European space missions p 225 A93-24345
- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 A93-26133
- Anthropometric survey of the astronaut applicants and astronauts from 1985 to 1991 [NASA-RP-1304] p 321 A93-29324

**ASTRONOMY**

- SETI in Europe p 237 A93-23908

**ASTROPHYSICS**

- The solar system: Importance of research to the biological sciences p 113 A93-18547

**ASYMMETRY**

- Interlabyrinth otolithic asymmetry under normal conditions and after the effect of a gravity change p 242 A93-35264
- Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 A93-32364

**ATAXIA**

- Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750

**ATMOSPHERIC CHEMISTRY**

- Titan p 114 A93-18553

**ATMOSPHERIC COMPOSITION**

- Algae and oxygen in earth's ancient atmosphere p 153 A93-27800
- Biosphere 2 - Overview of system performance during the first nine months [SAE PAPER 921129] p 291 A93-41317
- Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom [SAE PAPER 921216] p 296 A93-41392
- The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO [DE92-019411] p 5 A93-11630
- Engineering verification of the biomass production chamber p 67 A93-13996
- The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins [DE93-002940] p 115 A93-19751

**ATMOSPHERIC MODELS**

- Titan p 114 A93-18553

**ATMOSPHERIC PRESSURE**

- Subjective reactions and objective assessment of the auditory and ventilatory functions of the middle ear during changes in atmospheric pressure p 45 A93-15174
- On a possible role of carbon dioxide in the genesis of the hyperbaric neural syndrome p 200 A93-31190
- Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom [SAE PAPER 921216] p 296 A93-41392

**ATMOSPHERIC TEMPERATURE**

- The relationship between environmental conditions and UH-60 cockpit temperature [AD-A255918] p 69 A93-14090

**ATOMIC STRUCTURE**

- Atomic structure and chemistry of human serum albumin p 200 A93-31628

**ATROPHY**

- Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy p 78 A93-20033
- Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity p 78 A93-20036
- Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039
- A review of muscle atrophy in microgravity and during prolonged bed rest p 213 A93-30771
- Ultrastructural and biochemical studies on muscle atrophy induced by suspension and suspension with denervation in lower limbs of rats p 200 A93-31530
- Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703
- Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight p 272 A93-40548
- Myosin and troponin changes in rat soleus muscle after hindlimb suspension p 273 A93-41124
- Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery p 326 A93-44176
- Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression p 327 A93-44184
- Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity p 377 A93-49294
- Exercise during long term exposure to space: Value of exercise during space exploration p 82 A93-16807
- Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 A93-24763
- Growth factor involvement in tension-induced skeletal muscle growth [NASA-CR-193023] p 282 A93-27113

**ATROPINE**

- Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots p 7 A93-10326

**ATTACK AIRCRAFT**

- Advanced displays for military operations [AIAA PAPER 92-4243] p 28 A93-13350

**ATTACKING (ASSAULTING)**

- Relating flying hours to aircrew performance: Evidence for attack and transport missions [AD-A253988] p 25 A93-10719

**ATTENTION**

- Influence of animation on dynamical judgments p 180 A93-28692
- Predicting individual differences in complex skill acquisition - Dynamics of ability determinants p 181 A93-28731
- Assessing pilot workload - Why measure heart rate, HRV and respiration? p 168 A93-28741
- Visual and somesthetic influences on postural orientation in the median plane p 224 A93-32782
- Cognitive predictors of vigilance p 287 A93-40771
- Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements p 287 A93-40772
- A computer simulation model for attention distribution and event generation p 340 A93-45323
- Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures p 405 A93-55348
- Enhanced performance using physiological feedback [AD-A258006] p 130 A93-17816
- Attention factors associated with head-up display and helmet-mounted display systems [AD-A260204] p 235 A93-24001
- Method of encouraging attention by correlating video game difficulty with attention level [NASA-CASE-LAR-15022-1] p 288 A93-28128

**ATTITUDE (INCLINATION)**

- Development of a tactile perceived attitude transducer [AD-A253724] p 25 A93-11081
- Attitude awareness enhancements for the F-16 head-up display [AD-A260280] p 236 A93-24168
- Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 A93-28857
- Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display [AD-A264401] p 353 A93-30167
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 A93-31236

**ATTITUDE CONTROL**

- HUD climb/dive ladder configuration and unusual attitude recovery p 185 A93-27129
- Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display [AD-A264401] p 353 A93-30167

**ATTITUDE INDICATORS**

- Design of a display system for a human pilot's supervisory tasks p 27 A93-11201
- Up/down in (im)possible flight attitude indicators - Some effects of colour, shape and pattern p 185 A93-27128
- Evaluation of conforal and body-axis attitude information for spatial awareness p 229 A93-30070
- Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 A93-28857

**AUDIO FREQUENCIES**

- Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) [AD-A253393] p 30 A93-10217
- Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 A93-26521

**AUDIOLOGY**

- Electronystagmography and audio potentials in space flight p 9 A93-11675

**AUDITORY DEFECTS**

- Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel p 359 A93-45691
- The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555
- Measurement and evaluation of blast overpressure during F-15A crew station vulnerability assessment test [AD-A257152] p 104 A93-16033

**AUDITORY PERCEPTION**

- Effects of sustained +Gz stress on BAEP in waked rabbits p 10 A93-13531
- Effects of +Gz stress on medium- and long-latency auditory evoked responses p 11 A93-13708
- Subjective reactions and objective assessment of the auditory and ventilatory functions of the middle ear during changes in atmospheric pressure p 45 A93-15174

- The effects of hypoxia on auditory reaction time and P300 latency p 47 A93-16156
- The effects of chronic hypoxia on human auditory system sensitivity p 89 A93-18041
- Perceptual effects of synthetic reverberation on three-dimensional audio systems p 257 A93-36583
- Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel p 359 A93-45691
- Headphone localization of speech p 394 A93-52507
- Spectral motion produces an auditory after-effect p 405 A93-55579
- Auditory processing of complex sounds across frequency channels [AD-A253612] p 13 N93-10650
- Auditory perception [AD-A255061] p 23 N93-12469
- Psychophysical analyses of perceptual representations [AD-A255432] p 58 N93-14510
- Neuromagnetic investigations of cortical regions underlying short-term memory [AD-A255788] p 58 N93-14646
- Demodulation processes in auditory perception [AD-A255748] p 54 N93-15053
- Multimodal interactions in sensory-motor processing [AD-A255780] p 59 N93-15067
- An automated version of the dichotic listening test: Hardware, software, and procedural details [AD-A258114] p 120 N93-17895
- An analysis of a sustained flight operation training mission in Navy attack aircraft [AD-A258199] p 131 N93-18205
- Classification of complex sounds [AD-A258405] p 122 N93-18223
- Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m [DLR-FB-92-14] p 219 N93-24093
- The clearance test: A computer generated process for acquisition of auditory short term sensitivity p 343 N93-31234
- Auditory spectro-temporal pattern analysis [AD-A264691] p 361 N93-31981
- AUDITORY SENSATION AREAS**
- Simulation of excitatory/inhibitory interactions in single auditory neurons [AD-A253614] p 50 N93-13252
- AUDITORY SIGNALS**
- Acoustical and vibratory stimuli interdependencies and their applications in simulation and cue synchronization [AIAA PAPER 93-3562] p 406 A93-52662
- Virtual environment display for a 3D audio room simulation p 408 A93-53125
- Super auditory localization for improved human-machine interfaces [AD-A254699] p 34 N93-12229
- Auditory spectro-temporal pattern analysis [AD-A264691] p 361 N93-31981
- AUDITORY STIMULI**
- Spectral motion produces an auditory after-effect p 405 A93-55579
- AUDITORY TASKS**
- Performance differences in psychomotor and dichotic listening tests among landing craft air cushion vehicle operator trainees p 177 A93-27174
- Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator [AD-A258012] p 119 N93-17817
- An automated version of the dichotic listening test: Hardware, software, and procedural details [AD-A258114] p 120 N93-17895
- AUGMENTATION**
- Acquisition and production of skilled behavior in dynamic decision-making tasks [NASA-CR-192361] p 181 N93-20908
- AUTOCATALYSIS**
- Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise p 269 A93-36564
- Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793
- Nucleotide analogs based on pentaerythritol - An hypothesis p 325 A93-43794
- AUTOCORRELATION**
- Spontaneous discovery and use of categorical structure [AD-A261658] p 260 N93-26364
- AUTOKINESIS**
- OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571
- A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite p 240 A93-35215
- AUTOMATA THEORY**
- Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation p 186 A93-27148
- AUTOMATIC CONTROL**
- Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles p 135 A93-22916
- Automation, authority and angst - Revisited p 185 A93-27127
- Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 N93-11784
- Intelligent fault management for the Space Station active thermal control system p 32 N93-11930
- Habitat automation p 33 N93-11976
- Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts [AD-A254381] p 64 N93-12860
- Autonomous support for microorganism research in space [NASA-CR-192062] p 83 N93-17780
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 N93-17971
- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018
- X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 N93-18295
- Modeling the dynamics of mental workload and human performance in complex systems [AD-A258553] p 135 N93-19956
- Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070
- An automated method for determining mass properties [AD-A259924] p 236 N93-24441
- Automated system for early breast cancer detection in mammograms p 253 N93-25568
- Architecture of autonomous systems [NASA-CR-192974] p 266 N93-26047
- The ECLSS advanced automation project evolution and technology assessment p 312 N93-27723
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 N93-28850
- Operator and automation capability analysis: Picking the right team p 319 N93-28864
- System automation and pilot-vehicle-interface for unconstrained low-altitude night attack p 320 N93-28867
- A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever [NASA-CR-193301] p 365 N93-31844
- AUTOMATIC FLIGHT CONTROL**
- Pilot interaction with cockpit automation - Operational experiences with the Flight Management System p 189 A93-27455
- AUTOMATIC PILOTS**
- Performance consequences of automation-induced 'complacency' p 286 A93-39571
- An exploratory study of plan-view terrain displays for air carrier operations p 289 A93-39573
- Modeling strategic behavior in human-automation interaction - Why an 'aid' can (and should) go unused p 394 A93-52502
- AUTOMATIC TEST EQUIPMENT**
- Time stress measurement devices for enhancement of onboard bit performance p 144 N93-19762
- AUTOMATION**
- Flight deck automation and pilot workload [SAE PAPER 921132] p 291 A93-41320
- Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport [SAE PAPER 921133] p 291 A93-41321
- Human performance in complex task environments: A basis for the application of adaptive automation [AD-A255067] p 35 N93-12486
- Aircrew acceptance of automation in the cockpit p 144 N93-19761
- AUTOMOBILES**
- The design and use of automotive crash test dummies p 142 N93-19669
- Upper interior head protection. Volume 1. The development of a research test procedure [PB93-113769] p 194 N93-21537
- Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 N93-21795
- A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 N93-24490
- AUTONOMIC NERVOUS SYSTEM**
- Human autonomic responses to actual and simulated weightlessness p 85 A93-17540
- Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility p 116 A93-24037
- Carotid-cardiac baroreflex response and LBNP tolerance following resistance training p 164 A93-28696
- Prediction of motion sickness susceptibility p 403 A93-55940
- Autogenic-feedback training - A treatment for motion and space sickness p 404 A93-55946
- New techniques for positron emission tomography in the study of human neurological disorders [DE93-002098] p 95 N93-15900
- Non-invasive evaluation of the cardiac autonomic nervous system by PET [DE92-041077] p 96 N93-16441
- Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 N93-24738
- AUTONOMY**
- Emergence of telerobotic control enhancement from research in machine autonomy p 183 A93-27028
- Incorporating robot vision in tele-autonomous systems p 184 A93-27031
- Intelligent robotics capabilities of the teleautonomy testbed p 184 A93-27035
- Ground-based control of Space Station Freedom-based robots p 263 A93-35570
- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806
- Architecture of autonomous systems [NASA-CR-192974] p 266 N93-26047
- Interactive and cooperative sensing and control for advanced teleoperation p 366 N93-32108
- AUTOPSIES**
- 27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696
- AUTORADIOGRAPHY**
- Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743
- Autoradiographic distribution and applied pharmacological characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs [AD-A255607] p 54 N93-15009
- AVAILABILITY**
- Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures p 405 A93-55348
- AVIATION PSYCHOLOGY**
- Assessing for preflight predictors of airsickness p 8 A93-10335
- Short-term retest reliability of an experimental U.S. Air Force pilot candidate selection test battery p 56 A93-15661
- The 'artful' decision maker - A framework model for aeronautical decision making p 56 A93-15662
- A reappraisal of aging and pilot performance p 56 A93-15663
- Predictive validity of an automated personality inventory for Air Force pilot selection p 179 A93-27452
- The influence of flight experience on midair collision risk perception p 180 A93-28707
- On cockpit (crew) resource management p 223 A93-31490
- Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249
- Influence of aging and practice on piloting tasks p 286 A93-39708
- Flight leads and crisis decision-making p 404 A93-55161
- Human performance in complex task environments: A basis for the application of adaptive automation [AD-A255067] p 35 N93-12486
- Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660
- Human Factors Issues in Aircraft Maintenance and Inspection. Science, technology, and management: A program review [PB93-146975] p 234 N93-23647
- The five-factor personality model and naval aviation candidates [AD-A260227] p 225 N93-24319
- Field test of a computer-driven tool to measure psychological characteristics of aircrew [AD-A264484] p 341 N93-30425
- Computer-generated parallel tests for aptitude measurement in the selection of aviation operators [DLR-FB-92-29] p 343 N93-31229

- The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 A93-31233
- The clearance test: A computer generated process for acquisition of auditory short term sensitivity p 344 A93-31234
- The concentration loading test system: A computer generated process for acquisition of attentiveness control p 344 A93-31235
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 A93-31236
- The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 A93-31237
- The PARAT tests as examination system p 344 A93-31238

## AVIONICS

- Training for avionics evaluation [AIAA PAPER 92-4068] p 24 A93-11254
- Keeping the pilot in the loop p 29 A93-13413
- Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416
- Looks can kill --- helmet mounted displays, military avionics p 231 A93-31626
- Agent-based pilot-vehicle interfaces - Concept and prototype p 262 A93-34986
- Performance consequences of automation-induced 'complacency' p 286 A93-39571
- Failure mode workload theory and planning p 349 A93-42848
- Human-centered automation and AI - Ideas, insights, and issues from the Intelligent Cockpit Aids research effort p 407 A93-52764
- KC-135 crew reduction feasibility demonstration simulation study, Volume 3: Test and evaluation [AD-A253931] p 30 A93-10713
- Management of avionics data in the cockpit p 147 A93-19777
- Equipment, more or less ready to be used in helicopters p 148 A93-19785

## AXES OF ROTATION

- Factors influencing perceived angular velocity p 97 A93-17800

## AXONS

- Hair cell tufts and afferent innervation of the bullfrog crista ampullaris p 329 A93-44931
- Nerves and tissue repair [AD-A255299] p 53 A93-14535
- Extrathalamic modulation of cortical function [AD-A255440] p 53 A93-14782
- Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A256340] p 55 A93-15198

## AZO COMPOUNDS

- Quantitative autoradiographic analysis of muscarinic cholinergic and GABA<sub>A</sub> (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743

# B

## B-1 AIRCRAFT

- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 A93-29888

## BABOONS

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 A93-16166

## BACILLUS

- Responses of *Bacillus subtilis* spores to space environment - Results from experiments in space p 268 A93-36556

## BACK INJURIES

- Fractures of the vertebral column after ejection p 46 A93-15575
- Comment on 'Optimum vehicle acceleration profile for minimum human injury' by C. P. Hatsell p 392 A93-49607
- The US Navy Healthy Back Program: Effect on back knowledge among recruits [AD-A258368] p 121 A93-18210

## BACKSCATTERING

- A fiber optic probe for the detection of cataracts p 254 A93-25593

## BACTERIA

- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 37 A93-14121

- Magnetic domain state and coercivity predictions for biogenic greigite (Fe<sub>3</sub>S<sub>4</sub>) - A comparison of theory with magnetosome observations p 38 A93-16481

- Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821

- Multiple evolutionary origins of magnetotaxis in bacteria p 153 A93-27799

- Roles of water molecules in bacteria and viruses p 243 A93-36555

- Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280

- Microfossils of the Early Archean Apex chert - New evidence of the antiquity of life p 272 A93-40308

- Hydrothermal dehydration of aqueous organic compounds p 397 A93-53291

- Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters [NASA-TM-108375] p 6 A93-12174

- Biological conversion of synthesis gas [DE92-017673] p 40 A93-13269

- Biofilm ecology of bioluminescent bacteria [AD-A255282] p 42 A93-14532

- Primary charge separation in isolated photosystem 2 reaction centers [DE92-041128] p 82 A93-17189

- Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients [NASA-CR-192382] p 172 A93-20736

- Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 A93-27989

- Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 A93-28199

- Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan p 275 A93-28200

- Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia [FOA-B-40422-4.4] p 275 A93-28212

- Regulation of alternative CO<sub>2</sub> fixation pathways in prokaryotic and eucaryotic photosynthetic organisms [DE93-012109] p 276 A93-29181

- Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate [NASA-CR-193278] p 330 A93-30665

- Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols [NASA-CR-192570] p 359 A93-32354

- Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems [NASA-CR-192571] p 359 A93-32365

## BACTERICIDES

- Continuous monitoring of effluent iodine levels of Space Station water using solid state technology [SAE PAPER 921265] p 299 A93-41435

## BAGGAGE

- Recognition of partially occluded threat objects using the annealed Hopfield network p 142 A93-19466

## BALANCING

- Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161
- Alterations of proprioceptive function in the weightless environment p 86 A93-17549
- Postural stabilization on a moving platform oscillating at high frequencies p 252 A93-35497

## BARORECEPTORS

- Influence of ten-day head-down bedrest on human carotid baroreceptor-cardiac reflex function p 161 A93-28678

- Carotid-cardiac baroreflex response and LBNP tolerance following resistance training p 164 A93-28696

- Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781

- The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257

- Response of genioglossus EMG activity to passive tilt in men p 279 A93-41118

- Baroreflex function and cardiac structure with moderate endurance training in normotensive men p 332 A93-44182

## BAROTRAUMA

- Barotrauma in Boeing 737 cabin crew p 278 A93-39706

## BARS

- Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 A93-14870

## BASALT

- Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces --- space biological evolution p 411 A93-53286

## BEAT FREQUENCIES

- Carbon monoxide exposure of subjects with documented cardiac arrhythmias [PB93-179943] p 337 A93-30890

## BED REST

- Contractile properties of the calf triceps muscle in humans exposed to simulated weightlessness p 45 A93-15168

- Changes of REG during 4h head-down bed-rest p 46 A93-16075

- Effects of acute exercise on attenuated vagal baroreflex function during bed rest p 48 A93-16160

- Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161

- Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530

- Drug effects on orthostatic intolerance induced by bedrest p 86 A93-17544

- A physiological signal acquisition and processing system for bed-rest laboratory p 103 A93-19998

- Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039

- Effect of prolonged antiothostatic bed rest hypokinesia on functional properties of the neuromuscular system in humans p 116 A93-23151

- Response of the circadian system to 6 deg head-down tilt bed rest p 117 A93-24045

- Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679

- Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681

- Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683

- Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684

- Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687

- Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689

- Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280

- A review of muscle atrophy in microgravity and during prolonged bed rest p 213 A93-30771

- Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493

- Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494

- Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance p 280 A93-41119

- Performance and mood-state parameters during 30-day 6 deg head-down bed rest with exercise training p 281 A93-41169

- Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404

- Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females [NASA-TP-3298] p 128 A93-20318

## BEHAVIOR

- Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage p 111 A93-23074

- Combined effect of head-down tilt and gamma rays on the higher nervous activity of rats p 242 A93-35262

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 [DE92-040153] p 41 A93-13503

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 [DE92-040152] p 41 A93-13520

- How do zooplankton feed? A critical microgravity experiment p 158 A93-21097

- Gravity as a factor in the orientation and vertical migration of marine zooplankton p 158 A93-21098

- Studying the effects of microgravity on lower vertebrate development and behavior p 158 A93-21099

- Japanese treefrog experiment: onboard the Space Station Mir p 210 A93-24402

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates [DE93-007678] p 211 A93-24455

**BENZENE**

Molecular biology of anaerobic aromatic biodegradation  
[AD-A255213] p 42 N93-13863

Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents  
[AD-A255696] p 42 N93-14557

**BERYLLIUM ALLOYS**

Beryllium toxicity - An update p 104 A93-20779

**BERYLLIUM COMPOUNDS**

Beryllium toxicity - An update p 104 A93-20779

**BEVERAGES**

Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894

**BIAS**

Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176

**BIBLIOGRAPHIES**

Bibliographic guide to publications in aerospace medicine and related topics p 252 A93-35500  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 365)  
[NASA-SP-7011(365)] p 12 N93-10075

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 360)  
[NASA-SP-7011(360)] p 12 N93-10076

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 364)  
[NASA-SP-7011(364)] p 12 N93-10077

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366)  
[NASA-SP-7011(366)] p 12 N93-10079

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 367)  
[NASA-SP-7011(367)] p 12 N93-10080

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 368)  
[NASA-SP-7011(368)] p 53 N93-14603

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[NASA-CR-4476] p 55 N93-15583

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 370)  
[NASA-SP-7011(370)] p 121 N93-18108

Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990  
[NASA-CR-4475] p 123 N93-18376

Aerospace medicine and biology: A cumulative index to a continuing bibliography (supplement 371)  
[NASA-SP-7011(371)] p 172 N93-20889

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 372)  
[NASA-SP-7011(372)] p 172 N93-21044

Bibliography of the Biosciences Division: 1986 to present  
[DCIEM-92-20] p 209 N93-23343

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 373)  
[NASA-SP-7011(373)] p 256 N93-26945

An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine  
[AD-A265497] p 360 N93-31917

**BINAURAL HEARING**

AUDIMIR - Directional hearing at microgravity  
p 159 A93-26570

Auditory processing of complex sounds across frequency channels  
[AD-A253612] p 13 N93-10650

Simulation of excitatory/inhibitory interactions in single auditory neurons  
[AD-A253614] p 50 N93-13252

**BINDING**

The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs  
p 325 A93-43795

**BINOCULAR VISION**

Two types of occlusion cues for the perception of 3-D illusory objects in binocular fusion p 222 A93-30239  
Human stereopsis p 223 A93-30456  
Human behavior in virtual environments p 233 A93-33447

Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements  
p 287 A93-40772

Visualization and modeling of factors influencing visibility in computer-aided crewstation design  
[SAE PAPER 921135] p 292 A93-41323

Coordinated action in 3-D space  
[AD-A261418] p 261 N93-26449

Intermediate levels of visual processing  
[AD-A264117] p 335 N93-30192

**BIOACOUSTICS**

Classification of complex sounds  
[AD-A258405] p 122 N93-18223

Neuromagnetic investigation of cortical regions underlying short-term memory  
[AD-A261445] p 261 N93-26521

**BIOASSAY**

Heterogeneity of rat pituitary prolactin cells - Relationships among location, hormone assay and estrous cycle stage p 358 A93-46606

Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients  
[NASA-CR-192382] p 172 N93-20736

Characterization and classification of strains of Francisella tularensis isolated in the central Asian focus of the Soviet Union and in Japan  
[FOA-B-40421-4.4] p 275 N93-28200

**BIOASTRONAUTICS**

The space life sciences strategy for the 21st century  
p 1 A93-10636

Electronystagmography and audio potentials in space flight  
p 9 A93-11675

Results of experiments on the exploration of genetic effect of rocket flight factors with Drosophila melanogaster p 1 A93-11691

Human support for Mars exploration - Issues and approaches p 27 A93-12077

Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972

Metabolic changes observed in astronauts  
p 84 A93-17535

Pharmacologic considerations for Shuttle astronauts  
p 85 A93-17537

Intraocular pressure in microgravity  
p 85 A93-17539

Human autonomic responses to actual and simulated weightlessness p 85 A93-17540

Pharmacodynamic aspects of spaceflight  
p 73 A93-17541

Optimal sampling theory and population modelling - Application to determination of the influence of the microgravity environment on drug distribution and elimination p 85 A93-17542

Effects of gravity on gastric emptying, intestinal transit, and drug absorption p 85 A93-17543

Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547

Changes in total body water during spaceflight  
p 86 A93-17548

Alterations of proprioceptive function in the weightless environment p 86 A93-17549

Cardiovascular adaptation to spaceflight  
p 86 A93-17550

Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551

Hypokinesia and weightlessness: Clinical and physiologic aspects --- Book  
[ISBN 0-8236-2415-3] p 87 A93-17897

Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073

Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029

Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy  
p 78 A93-20033

Conference on Correlations of Aging and Space Effects on Biosystems, Oct. 30-Nov. 1, 1989, Proceedings --- Book p 79 A93-20651

Cardiovascular physiology in space flight  
p 93 A93-20654

Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899

Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044

Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space  
p 130 A93-25207

Study design for microgravity human physiology experiments p 118 A93-25208

COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569

Influence of microgravity on immune system and genetic information p 160 A93-26572

Pictorial communication in virtual and real environments p 182 A93-26896

Effects of antithrostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693

Cytokine secretion by immune cells in space p 153 A93-28694

Variable lymphocyte responses in rats after space flight p 154 A93-28704

Alteration in human mononuclear leucocytes following space flight p 165 A93-28705

Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706

Skeletal muscle responses to unloading with special reference to man p 166 A93-28718

Cardiovascular physiology - Effects of microgravity  
p 166 A93-28719

A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727

Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728

Sperm motility under conditions of weightlessness  
p 156 A93-28730

In vivo testing confirms a blunting of the human cell-mediated immune mechanism during space flight  
p 167 A93-28732

Neurology of microgravity and space travel  
p 168 A93-28735

Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity  
p 168 A93-28736

Health in space - And on Earth p 156 A93-28738

Vestibular problems in diving and in space  
p 169 A93-28747

Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750

Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751

An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle p 170 A93-28758

Cancer risk assessment with intermittent exposure  
p 171 A93-28766

Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177

Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295

Mental rotation - A key to mitigation of motion sickness in the virtual environments? p 387 A93-49404

Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401

Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404

Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406

Medical concerns for exploration-class missions  
p 386 A93-52409

Space and cognition - The measurement of behavioral functions during a 6-day space mission  
p 405 A93-55164

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 365)  
[NASA-SP-7011(365)] p 12 N93-10075

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 360)  
[NASA-SP-7011(360)] p 12 N93-10076

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 364)  
[NASA-SP-7011(364)] p 12 N93-10077

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366)  
[NASA-SP-7011(366)] p 12 N93-10079

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 367)  
[NASA-SP-7011(367)] p 12 N93-10080

Space flight and immune system p 14 N93-11284

An overview of gravitational physiology  
[NASA-TM-102849] p 35 N93-12319

Occupational ergonomics in space p 68 N93-14013

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 368)  
[NASA-SP-7011(368)] p 53 N93-14603

STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission  
[NASA-TM-108034] p 80 N93-15823

Aerospace medicine and biology: A continuing bibliography with indexes (supplement 370)  
[NASA-SP-7011(370)] p 121 N93-18108

Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990  
[NASA-CR-4475] p 123 N93-18376

Cardiopulmonary discipline science plan  
[NASA-TM-108040] p 125 N93-19648

Neuroscience discipline science plan  
[NASA-TM-108041] p 128 N93-19882

Regulatory physiology discipline science plan  
[NASA-TM-108038] p 115 N93-19891

Musculoskeletal discipline science plan  
[NASA-TM-108039] p 128 N93-19892



- Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females  
[NASA-TP-3298] p 128 N93-20318
- Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition  
[NASA-TP-3297] p 149 N93-20319
- Aerospace medicine and biology: A cumulative index to a continuing bibliography (supplement 371)  
[NASA-SP-7011(371)] p 172 N93-20889
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 372)  
[NASA-SP-7011(372)] p 172 N93-21044
- Life sciences utilization of Space Station Freedom  
p 205 N93-22622
- Life sciences recruitment objectives  
p 205 N93-22623
- Biomedical Monitoring and Countermeasures Facility  
p 205 N93-22624
- Two techniques for measuring locomotion impact forces during zero G  
[NASA-TP-3305] p 217 N93-23410
- SETI in Europe  
p 237 N93-23908
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 373)  
[NASA-SP-7011(373)] p 256 N93-26945
- BIOCHEMISTRY**
- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath)  
p 37 A93-14121
- Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation  
p 49 A93-17442
- Comets and the formation of biochemical compounds on the primitive earth - A review  
p 109 A93-17977
- Some biochemical and functional characteristics of body state during multi-hour operator activity under extreme conditions  
p 161 A93-27686
- Ultrastructural and biochemical studies on muscle atrophy induced by suspension and denervation with denervation in lower limbs of rats  
p 200 A93-31530
- Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA?  
p 269 A93-36560
- Chiral-symmetry-breaking in nonequilibrium chemical systems - The racemization influence  
p 269 A93-36563
- Interdisciplinary research and training program in the plant sciences  
[DE92-015919] p 5 N93-10835
- Physiological analyses of the afferents controlling brain neurochemical systems  
[AD-A253185] p 14 N93-11146
- A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019917] p 40 N93-13034
- A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019916] p 40 N93-13083
- Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A256340] p 55 N93-15198
- Biochemically active layers for selective material detection sensors  
[MBB-Z-0440-92-PUB] p 158 N93-20959
- Improved inhalation technology for setting safe exposure levels for workplace chemicals  
p 174 N93-22164
- Primary events in olfactory reception  
[AD-A260562] p 255 N93-25944
- The role of pyridoxine as a countermeasure for in-flight loss of lean body mass  
p 255 N93-26068
- Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan  
[FOA-B-40421-4.4] p 275 N93-28200
- Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A264829] p 336 N93-30613
- Spontaneous regulating mechanisms that may have led to the origin of life  
[DE93-603677] p 331 N93-31161
- BIOCONVERSION**
- Biological conversion of synthesis gas culture development  
[DE92-001279] p 6 N93-12482
- Biological conversion of synthesis gas culture  
[DE92-017673] p 40 N93-13269
- Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals  
[DE93-006235] p 276 N93-28890
- BIODEGRADATION**
- Biodegradation of materials in water reclamation systems  
[SAE PAPER 921311] p 303 A93-41473
- Biological conversion of synthesis gas culture development  
[DE92-001279] p 6 N93-12482
- Molecular biology of anaerobic aromatic biodegradation  
[AD-A255213] p 42 N93-13863
- BIODYNAMICS**
- A study of biological effects and characteristics of dynamic responses of organism on landing impact  
p 10 A93-13533
- Army cockpit dealthalization program  
p 61 A93-15419
- An improved simulation based biomechanical model to estimate static muscle loadings  
p 160 A93-27172
- An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle  
p 170 A93-28758
- Development of the Hermes EVA Space Suit Glove  
[SAE PAPER 921256] p 299 A93-41426
- Development of a 500 hPa shoulder joint for the European EVA Space Suit System  
[SAE PAPER 921257] p 299 A93-41427
- Intramuscular pressure and electromyography as indexes of force during isokinetic exercise  
p 380 A93-49291
- The effect of variable seat back angles on human response to  $\pm G_z$  impact accelerations  
[AD-A250673] p 31 N93-11559
- Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers  
[NASA-CR-185679] p 34 N93-12195
- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system  
[NASA-CR-185689] p 34 N93-12211
- Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident?  
p 125 N93-19664
- Design/development of an enhanced biodynamic manikin  
p 142 N93-19667
- The design and use of automotive crash test dummies  
p 142 N93-19669
- An improved anthropometric test device  
p 143 N93-19670
- A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration  
p 143 N93-19672
- Microcomputer based software for biodynamic simulation  
p 196 N93-22191
- Materials dispersion and biodynamics project research  
p 207 N93-22651
- An automated method for determining mass properties  
[AD-A259924] p 236 N93-24441
- Evaluation of lens distortion errors in video-based motion analysis  
[NASA-TP-3266] p 258 N93-25736
- EVA Glove Research Team  
[NASA-CR-193014] p 313 N93-27847
- Anthropometric survey of the astronaut applicants and astronauts from 1985 to 1991  
[NASA-RP-1304] p 321 N93-29324
- Visualization techniques for analyzing control of human movement: Affine mappings between multi-dimensional spaces  
p 353 N93-30204
- Prevention of cumulative trauma disorders  
[PB93-188332] p 338 N93-31138
- Transmission of vibration through the human body to the head: A summary of experimental data  
[ISVR-TR-218] p 361 N93-32237
- BIOELECTRIC POTENTIAL**
- New technologies for in-flight pasteless bioelectrodes  
p 289 A93-41174
- Comparative analytical study of evoked and event related potentials as correlates of cognitive processes  
[AD-A261388] p 261 N93-26446
- An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination  
[AD-A264293] p 331 N93-30818
- BIOELECTRICITY**
- Infraslow bioelectric activity of the monkey's brain in the development of the high-pressure neural syndrome  
p 75 A93-18286
- Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness  
p 239 A93-35211
- The central nervous connections involved in motion induced emesis  
p 399 A93-55931
- An introduction to the information processing components of the brain  
[RSRE-MEMO-4350] p 25 N93-10979
- Explosives search dogs  
p 159 N93-21933
- Comparison of total body water estimates from O-18 and bioelectrical response prediction equations  
[NASA-TP-3299] p 218 N93-23734
- Biomagnetic localization from transient quasi-static events  
[DE93-007328] p 253 N93-25186
- BIOENGINEERING**
- Biomedical engineering - A means to add new dimension to medicine and research  
p 190 A93-28717
- Hazard and risk assessment for surface components of a lunar base Controlled Ecological Life Support System  
[SAE PAPER 921285] p 302 A93-41451
- Advanced life support systems in lunar and Martian environments utilizing a higher plant based engineering paradigm  
[SAE PAPER 921286] p 302 A93-41452
- Intracellular proteins produced by mammalian cells in response to environmental stress  
p 328 A93-44929
- BIOFEEDBACK**
- 'Screening-Controlling' Psychological Selection System for Air Force pilot cadet  
p 222 A93-30440
- Autogenic-feedback training - A treatment for motion and space sickness  
p 404 A93-55946
- BIOGENY**
- To the stars with the cytoskeleton? p 1 A93-11198
- BIOGEOCHEMISTRY**
- Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars  
p 197 A93-28377
- Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle  
[NASA-CR-4497] p 269 N93-26157
- BIOGRAPHY**
- The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training  
[AD-A258025] p 131 N93-17919
- BIOINSTRUMENTATION**
- Biochemically active layers for selective material detection sensors  
[MBB-Z-0440-92-PUB] p 158 N93-20959
- The challenge of biodegradation for screening persons carrying explosives  
p 159 N93-21931
- Explosives search dogs  
p 159 N93-21933
- Biomedical Monitoring and Countermeasures Facility  
p 205 N93-22624
- Transcutaneous analyte measuring methods  
[AD-A262861] p 333 N93-29509
- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC)  
[AD-A264492] p 335 N93-30400
- Prevention of cumulative trauma disorders  
[PB93-188332] p 338 N93-31138
- BIOLOGICAL EFFECTS**
- Free radical attack - Biological test for human resistance capability  
p 39 A93-17434
- Can the adult skeleton recover lost bone?  
p 93 A93-20656
- Effects of error-proofing and chemical/biological/radiation protective glove use on touch panel operation  
p 186 A93-27152
- On the biological effects of cosmic rays - Epidemiological studies  
p 239 A93-34858
- Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenous layer of rat testes  
p 240 A93-35229
- Possible biological significance of the curvature of equipotential surfaces of gravity-force tidal variations  
p 324 A93-43025
- The internal dynamics of slowly rotating biological systems  
p 375 A93-49208
- Some qualitative and quantitative aspects of the fast-rotating clinostat as a research tool --- for effects of weightlessness on biological objects  
p 375 A93-49209
- Centrifuges - Their development and use in gravitational biology  
p 376 A93-49210
- How well does the clinostat mimic the effect of microgravity on plant cells and organs?  
p 376 A93-49213
- Intermittent cold exposure causes a muscle-specific shift in the fiber type composition in rats  
p 378 A93-52618
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 365)  
[NASA-SP-7011(365)] p 12 N93-10075
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 360)  
[NASA-SP-7011(360)] p 12 N93-10076
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 364)  
[NASA-SP-7011(364)] p 12 N93-10077
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366)  
[NASA-SP-7011(366)] p 12 N93-10079
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 367)  
[NASA-SP-7011(367)] p 12 N93-10080



- Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro  
[DE92-013510] p 13 N93-10626
- The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO  
[DE92-019411] p 5 N93-11630
- Radiation physics, biophysics, and radiation biology  
[DE92-013673] p 6 N93-12266
- Establishing laboratory standards for biological flight experiments  
[NASA-CR-184402] p 40 N93-12901
- Effects of spaceflight on the proliferation of jejunal mucosal cells  
[NASA-CR-191303] p 51 N93-13449
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2  
[DE92-040153] p 41 N93-13503
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1  
[DE92-040152] p 41 N93-13520
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 368)  
[NASA-SP-7011(368)] p 53 N93-14603
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 369)  
[NASA-SP-7011(369)] p 53 N93-14731
- Joint HVAC transmission EMF environmental study  
[DE92-017863] p 43 N93-15211
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4  
[DE92-040955] p 95 N93-16166
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation  
[DE92-041134] p 96 N93-16552
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MS-C-21979-1] p 82 N93-17049
- Target fragmentation in radiobiology  
[NASA-TM-4408] p 124 N93-18381
- The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins  
[DE93-002940] p 115 N93-19751
- Health effects of low-frequency electric and magnetic fields  
[DE93-005675] p 127 N93-19838
- Aerospace medicine and biology: A cumulative index to a continuing bibliography (supplement 371)  
[NASA-SP-7011(371)] p 172 N93-20889
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 372)  
[NASA-SP-7011(372)] p 172 N93-21044
- Studying the effects of microgravity on lower vertebrate development and behavior  
p 158 N93-21099
- Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates  
[DE93-007677] p 207 N93-22913
- The USO-concept applied to a biological model experiment  
p 210 N93-24379
- Japanese treefrog experiment onboard the Space Station Mir  
p 210 N93-24402
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates  
[DE93-007678] p 211 N93-24455
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 373)  
[NASA-SP-7011(373)] p 256 N93-26945
- Gene transcription and electromagnetic fields  
[DE93-010854] p 276 N93-28848
- Investigation of laser-induced retinal damage  
[AD-A264096] p 338 N93-31094
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377)  
[NASA-SP-7011(377)] p 361 N93-31924
- Mechanisms of microwave induced damage in biologic materials  
[AD-A264415] p 358 N93-32035
- BIOLOGICAL EVOLUTION**
- Comets as a possible source of prebiotic molecules  
p 109 A93-17979
- Cometary supply of terrestrial organics - Lessons from the K/T and the present epoch*  
p 109 A93-17981
- Modern life at high temperatures --- evolution and taxonomy of extreme-thermophilic bacteria  
p 74 A93-18003
- The earliest fossil evidence for sexual dimorphism in primates  
p 152 A93-27775
- Multiple evolutionary origins of magnetotaxis in bacteria  
p 153 A93-27799
- Photo and thermal reactions of ferrous hydroxide --- formation of hydrogen in Archean ocean relevant to chemical origin of life  
p 269 A93-36561
- Some proteins keep 'living fossil' pre-sequence  
p 244 A93-36562
- Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise  
p 269 A93-36564
- Microfossils of the Early Archean Apex chert - New evidence of the antiquity of life  
p 272 A93-40308
- Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystriocomorphous rodent (Mammalia: Rodentia)  
p 328 A93-44903
- Aqueous high-temperature and high-pressure organic geochemistry of hydrothermal vent systems  
p 397 A93-53285
- The violent environment of the origin of life - Progress and uncertainties  
p 412 A93-53292
- Motion sickness and evolution  
p 399 A93-55930
- Self-programming of matter and the evolution of proto-biological organizations  
[DE92-015244] p 5 N93-10628
- Hydrothermal organic synthesis experiments  
[NASA-CR-191257] p 41 N93-13457
- Overview: Exobiology in solar system exploration  
p 112 N93-18546
- The solar system: Importance of research to the biological sciences  
p 113 N93-18547
- Venus: A search for clues to early biological possibilities  
p 113 N93-18549
- Mars: A reassessment of its interest to biology  
p 113 N93-18550
- A robust model for finding optimal evolutionary trees  
[DE93-010682] p 330 N93-30483
- Spontaneous regulating mechanisms that may have led to the origin of life  
[DE93-603677] p 331 N93-31161
- BIOLOGICAL MODELS (MATHEMATICS)**
- Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity  
p 1 A93-11199
- Model for the computation of self-motion in biological systems  
p 97 A93-17673
- Consequences of a basic model of external-information perception  
p 98 A93-18414
- A method for the theoretical calculation of the parameters of single-stage decompression with equal probability of safety  
p 160 A93-26832
- Human-like agents with posture planning ability  
p 192 A93-29118
- Estimation of the number of operators and their efficiency in flight vehicle control  
p 193 A93-29696
- Predicting skeletal adaptation in altered gravity environments  
p 213 A93-30772
- Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System  
p 202 A93-32651
- Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide  
p 271 A93-39707
- Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package  
[SAE PAPER 921354] p 306 A93-41513
- Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design  
[SAE PAPER 921356] p 307 A93-41515
- The efficiency of thermoregulatory responses in the cooling of the organism  
p 325 A93-43136
- Modeling strategic behavior in human-automation interaction - Why an 'aid' can (and should) go unused  
p 394 A93-52502
- Simulation of excitatory/inhibitory interactions in single auditory neurons  
[AD-A253614] p 50 N93-13252
- Neural network retinal model real time implementation  
[AD-A255652] p 52 N93-14210
- Application of RADTRAN to estimation of doses to persons in enclosed spaces  
[DE93-000758] p 97 N93-17230
- Target fragmentation in radiobiology  
[NASA-TM-4408] p 124 N93-18381
- Anatomy and physiology of plant conductive systems  
[PB93-156032] p 245 N93-25877
- EVA Glove Research Team  
[NASA-CR-193014] p 313 N93-27847
- Comparative mutagenesis of human cells in vivo and in vitro  
[DE93-012269] p 276 N93-28651
- Sudden loading and fatigue effects on the human spine  
[PB93-167526] p 286 N93-29199
- Modelling and simulation of human retinal vision processing  
p 335 N93-30269
- A robust model for finding optimal evolutionary trees  
[DE93-010682] p 330 N93-30483
- A simple computational model of center-surround receptive fields in the retina  
[AD-A264723] p 336 N93-30515
- BIOLOGY**
- Achieving the promise of the bioscience revolution: The role of the Federal Government  
[PB93-139970] p 244 N93-25457
- BIOLUMINESCENCE**
- Bioluminescence ecology of bioluminescent bacteria  
[AD-A255282] p 42 N93-14532
- BIOMAGNETISM**
- A weighted iterative algorithm for neuromagnetic imaging  
[DE92-040244] p 51 N93-13522
- Neuromagnetic investigations of cortical regions underlying short-term memory  
[AD-A255788] p 58 N93-14646
- Sensory sensitivities and discriminations and their roles in aviation  
[AD-A259742] p 224 N93-23479
- Biomagnetic localization from transient quasi-static events  
[DE93-007328] p 253 N93-25186
- Neuromagnetic investigation of cortical regions underlying short-term memory  
[AD-A261445] p 261 N93-26521
- BIOMASS**
- Engineering verification of the biomass production chamber  
p 67 N93-13996
- Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model  
p 245 N93-26069
- Development of a pyrolysis waste recovery model with designs, test plans, and applications for space-based habitats  
p 267 N93-26076
- Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals  
[DE93-006235] p 276 N93-28890
- Design of biomass management systems and components for closed loop life support systems  
p 351 N93-29728
- BIOMASS ENERGY PRODUCTION**
- Biomass productivity and sustainability of a bioregenerative life-support system  
[SAE PAPER 921359] p 307 A93-41518
- BIOMEDICAL DATA**
- A lunar-based chemical analysis laboratory  
[ISBN 0-937194-25-5] p 39 A93-17426
- Supporting human exploration in space - Biomedical research  
p 48 A93-17428
- Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL)  
p 39 A93-17429
- Crew factors --- and their psychological problems in long term space flight  
p 57 A93-17431
- Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory  
p 48 A93-17439
- K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions  
p 90 A93-18406
- Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System  
p 202 A93-32651
- Longitudinal study of astronaut health - Mortality in the years 1959-1991  
p 216 A93-32783
- DoD space radiation concerns  
[AD-A253135] p 13 N93-10613
- An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine  
[AD-A265497] p 360 N93-31917
- BIOMETRICS**
- Cardiorespiratory measures of workload during continuous manual performance  
p 160 A93-27192
- BIONICS**
- Mechanical forces and their second messengers in stimulating cell growth in vitro  
p 204 A93-33043
- Equivalent dose of cosmic rays at representative points of human-body models  
p 248 A93-35223
- BIOPHYSICS**
- Radiation physics, biophysics, and radiation biology  
[DE92-013673] p 6 N93-12266
- A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019917] p 40 N93-13034
- A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019916] p 40 N93-13083
- Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A256340] p 55 N93-15198
- Gene transcription and electromagnetic fields  
[DE93-010854] p 276 N93-28848
- Biophysical model for handwear insulation testing  
[AD-A262926] p 320 N93-28884

## BIOPOLYMERS

- Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A264829] p 336 N93-30613

## BIOPOLYMERS

- Liquid water and the origin of life p 268 A93-36552

## BIOPROCESSING

- The current status and prospects in the study of cell physiology under microgravity p 38 A93-16001  
Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309  
Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357] p 307 A93-41516  
Materials dispersion and biodynamics project research p 207 N93-22651

## BIOREACTORS

- Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design [SAE PAPER 921277] p 301 A93-41446  
Method for culturing mammalian cells in a perfused bioreactor [NASA-CASE-MSC-21293-2] p 4 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor [NASA-CASE-MSC-21294-2] p 5 N93-10110  
Biological conversion of synthesis gas culture development [DE92-001279] p 6 N93-12482  
High density cell culture system [NASA-CASE-MSC-22060-1] p 114 N93-19037

## BIOSATELLITES

- Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419  
Quantitative autoradiographic analysis of muscarinic cholinergic and GABA<sub>A</sub> (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743  
Turning-over reaction during free fall in labyrinthectomized rats after a flight on the Cosmos 936 biosatellite p 241 A93-35246  
Radiation dose measurement and biostack experiment in biocabin on board satellite p 327 A93-44845

## BIOSPHERE

- The life span of the biosphere revisited p 149 A93-21847  
Biosphere 2 - Overview of system performance during the first nine months [SAE PAPER 921129] p 291 A93-41317  
Deep-sea smokers - Windows to a subsurface biosphere? p 397 A93-53284  
Life systems for a lunar base p 66 N93-13992  
Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 N93-17448  
Closed ecological systems: From test tubes to Earth's biosphere p 315 N93-27976

## BIOSYNTHESIS

- An efficient lightning energy source on the early earth p 73 A93-17823  
The evolution of aminoacyl-tRNA synthetases, the biosynthetic pathways of amino acids and the genetic code p 73 A93-17825  
The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 153 A93-28691  
Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E<sub>2</sub> synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728  
Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands p 156 A93-28746  
Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens p 201 A93-32118  
Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933  
Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*) p 329 A93-44941  
Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection p 397 A93-52878  
Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835  
Nitrogen control of chloroplast development and differentiation [DE92-017392] p 39 N93-12768  
Biological conversion of synthesis gas [DE92-017673] p 40 N93-13269  
Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 N93-13449  
The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068

## BIOTECHNOLOGY

- Biomedical engineering - A means to add new dimension to medicine and research p 190 A93-28717  
New technologies for in-flight pasteless bioelectrodes p 289 A93-41174  
Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design [SAE PAPER 921277] p 301 A93-41446  
Monitoring core temperature during exercise - Ingestible sensor vs. rectal thermistor p 394 A93-52309  
Commercial opportunities in bioprocessors and physiological testing aboard Space Station Freedom p 206 N93-22649  
Biotechnical production and use of pyruvic acid with special reference to coenzyme regeneration [VTT-PUBS-77] p 209 N93-23369  
Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551  
Achieving the promise of the bioscience revolution: The role of the Federal Government [PB93-139970] p 244 N93-25457  
The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595  
Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 N93-28835  
Center of Excellence in Biotechnology (Research) [AD-A263598] p 330 N93-29915

## BIPOLARITY

- A simple computational model of center-surround receptive fields in the retina [AD-A264723] p 336 N93-30515

## BIRDS

- Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 N93-24763

## BLACKOUT (PHYSIOLOGY)

- The effect of G-LOC on psychomotor performance and behavior p 130 A93-25205  
Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness [AD-A255485] p 54 N93-14789

## BLOOD

- Blood and urine responses to ingesting fluids of various salt and glucose concentrations --- to combat orthostatic intolerance p 83 A93-17528  
Dynamic characteristic of changes of oxygen saturation of blood hemoglobin under conditions of acute hypoxia in human body p 91 A93-19993  
Autorosette formation in the peripheral blood of people with lengthy limitations of motor activity p 250 A93-35245  
Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705  
Early markers of HIV infection and subclinical disease progression p 17 N93-11296  
The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident [AD-A254550] p 49 N93-12612  
Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 N93-16166  
Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 N93-19683  
Monitoring human tissues for toxic substances [PB92-223239] p 173 N93-21498  
13 C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 N93-28293  
Transcutaneous analyte measuring methods [AD-A262861] p 333 N93-29509  
Fundamental diagnostic hematology: Anemia (second edition) [PB93-188662] p 338 N93-31140  
Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) [PB93-188670] p 338 N93-31158  
Blood lipids in aircrew recruits and in RAF aviators p 362 N93-32251

## BLOOD CELLS

- Structural and cytochemical signs of the development of deadaptation, as determined from blood characteristics p 252 A93-36724  
Freeze-dried human red blood cells [AD-A253295] p 14 N93-11193  
Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin [AD-A258185] p 120 N93-17900

## SUBJECT INDEX

## BLOOD CIRCULATION

- Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation p 77 A93-18301  
Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899  
Dynamics of the central and peripheral circulation of active rats on the first day of antihypertensive hypokinesia (The role of training) p 242 A93-35261  
Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness p 327 A93-44842  
Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 A93-49180  
Freeze-dried human red blood cells [AD-A253295] p 14 N93-11193

## BLOOD COAGULATION

- Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) [PB93-188670] p 338 N93-31158

## BLOOD FLOW

- Effects of oxygen on regulation of cerebral blood flow in rabbits adapted to hypoxia p 3 A93-13545  
Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972  
Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533  
Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293  
Effects of head-down tilt for 10 days on the compliance of the leg p 162 A93-28680  
Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281  
Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072  
Ultrasonic location of gas bubbles in the vascular bed of a person working in a space suit p 262 A93-35239  
Correlation between the lymph dynamics and venous pressure during short-term antihypertensive effects p 325 A93-43070  
Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990 [NASA-CR-4475] p 123 N93-18376  
Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 N93-29502

## BLOOD PLASMA

- Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronectin p 47 A93-16157  
Immune response during space flight p 94 A93-20664  
Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally p 111 A93-21684  
Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048  
Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687  
Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751  
Effect of acute hypoxia exposures on plasma endothelin in rats p 199 A93-30442  
Effects of cold injury on serum angiotensin converting enzyme activities in rats p 199 A93-30444  
Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188  
Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072  
Protein composition of the blood plasma of cosmonauts after lengthy orbital flights p 249 A93-35243  
Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190  
Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567  
Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570  
Silent HIV infection p 16 N93-11293  
Carboxyalkylated hemoglobin as a potential blood substitute [AD-A252329] p 22 N93-11561  
Complement proteins and decompression sickness susceptibility [AD-A254448] p 50 N93-12905  
Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin [AD-A258185] p 120 N93-17900  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133

**BLOOD PRESSURE**

- Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968
- Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt p 37 A93-14974
- The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204
- Increased orthostatic blood pressure variability after prolonged head-down tilt p 161 A93-28676
- Carotid-cardiac baroreflex response and LBNP tolerance following resistance training p 164 A93-28696
- Alanine increases blood pressure during hypotension p 203 A93-33027
- Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495
- Direct measurement of capillary blood pressure in the human lip p 279 A93-40550
- Correlation between the lymph dynamics and venous pressure during short-term antihypertensive effects p 325 A93-43070
- Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096
- Transcapillary fluid responses to lower body negative pressure p 380 A93-49292
- Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620
- Central cardiovascular pressures during graded water immersion in humans p 402 A93-55457
- Development and enhancement of a mode of performance and decision making under stress in a real life setting [AD-A257796] p 123 A93-18363
- Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces p 370 A93-32260

**BLOOD VESSELS**

- Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia p 76 A93-18295

**BLOOD VOLUME**

- Altered baseline blood volume and the norepinephrine response to stress in humans p 43 A93-14123
- Metabolic changes observed in astronauts p 84 A93-17535
- Drug effects on orthostatic intolerance induced by bedrest p 86 A93-17544
- Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206
- The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686
- Gravitational stress and volume regulation p 165 A93-28709
- Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721
- Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495
- Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620
- Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 A93-12014
- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 A93-26133

**BLOWERS**

- Development of the carbon dioxide removal system blower used on Space Station Freedom [SAE PAPER 921188] p 294 A93-41367
- Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21) [AD-A253394] p 30 A93-10288

**BODY COMPOSITION (BIOLOGY)**

- Protein absorption and energy digestibility at high altitude p 115 A93-21683

**BODY FLUIDS**

- The effects of cephalad body fluid redistribution on the ultrastructure of the vestibular apparatus of guinea pig p 4 A93-13717
- Changes in total body water during spaceflight p 86 A93-17548
- Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029
- Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207
- Changes in body fluid compartments during hypohydration and rehydration in heat-acclimated tropical subjects p 251 A93-35496
- Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125

- Methods development for total organic carbon accountability [NASA-CR-184438] p 40 A93-12949
- Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 A93-23734
- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 A93-26133

**BODY KINEMATICS**

- Influence of animation on dynamical judgments p 98 A93-20275
- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 A93-12211

**BODY MEASUREMENT (BIOLOGY)**

- A body mass measurement device based on the oscillation principle p 221 A93-24400
- Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 A93-32243

**BODY SIZE (BIOLOGY)**

- Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers [NASA-CR-185679] p 34 A93-12195
- Body composition and physical performance [AD-A255627] p 69 A93-14161
- A body mass measurement device based on the oscillation principle p 221 A93-24400

**BODY SWAY TEST**

- Effects of visually induced self-motion perception (vection) on upright standing posture p 214 A93-31531
- Postural stabilization on a moving platform oscillating at high frequencies p 252 A93-35497

**BODY TEMPERATURE**

- Thermal convergence fails to predict heat tolerance limits p 8 A93-10331
- Preliminary study on the physiological changes and tolerance in ground squirrels under several specific experimental conditions p 2 A93-13532
- A second postcooling afterdrop - More evidence for a convective mechanism p 44 A93-14969
- Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074
- Comparison of four noninvasive rewarming methods for mild hypothermia p 88 A93-18037
- Decrement in manual arm performance during whole body cooling p 88 A93-18038
- Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats p 75 A93-18039
- Heat stress in protective clothing - Validation of a computer model and the Heat-Humidity Index (HHI) p 88 A93-18040
- Sleep and circadian rhythms p 94 A93-20659
- Study of the functioning of the central and the peripheral contours of the thermoregulation system using a thermophysical model of the rabbit body p 111 A93-23075
- Investigation of the character of changes in the 'central' temperature of the body in cold environment, using a rabbit-body thermoregulation model p 112 A93-25651
- Effect of heat acclimatization on cAMP level in plasma, cerebrospinal fluid and preoptic area-hypothalamus in hyperthermal rabbits p 199 A93-30437
- Effects of cold injury on serum angiotensin converting enzyme activities in rats p 199 A93-30444
- Adjustable temperature level of a physiological thermostat and the feasibility of its precise maintenance p 324 A93-43036
- The efficiency of thermoregulatory responses in the cooling of the organism p 325 A93-43136
- Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism p 360 A93-46968
- Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49218
- Monitoring core temperature during exercise - Ingestible sensor vs. rectal thermistor p 394 A93-52309
- Intermittent cold exposure causes a muscle-specific shift in the fiber type composition in rats p 378 A93-52618
- Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia [AD-A255120] p 34 A93-12291
- Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 A93-12960
- A review of models of the human temperature regulation system [AD-A258023] p 120 A93-17918

- Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise [AD-A259068] p 124 A93-19072
- Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress [AD-A258552] p 148 A93-19955
- Measurement of behavioral thermoregulation [PB92-217033] p 172 A93-21046
- AFTERRISE: Deep body temperature following exercise p 218 A93-23984
- Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates [AD-A262762] p 285 A93-28939
- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits p 350 A93-29471
- The effects of cockpit heat on aviator sleep parameters p 371 A93-32266

**BODY WEIGHT**

- Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats p 75 A93-18039
- Energy expenditure climbing Mt. Everest p 92 A93-20031
- Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685
- I-NIGHTS and beyond --- Interim-Night Integrated Goggle and Head Tracking System p 227 A93-30054
- Body composition and physical performance [AD-A255627] p 69 A93-14161
- Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALS) [AD-A258364] p 121 A93-18209
- Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge [AD-A264260] p 337 A93-30894

**BOEING AIRCRAFT**

- Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport [SAE PAPER 921133] p 291 A93-41321
- Occupant kinematics simulation of the Kegworth air accident p 142 A93-19662
- Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 A93-19664

**BOEING 737 AIRCRAFT**

- Barotrauma in Boeing 737 cabin crew p 278 A93-39706

**BOMBING EQUIPMENT**

- The effects of head and sensor movement on flight profiles during simulated dive bombing p 185 A93-27131

**BONE DEMINERALIZATION**

- Age-related bone changes p 93 A93-20655
- Can the adult skeleton recover lost bone? p 93 A93-20656
- Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545
- Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177
- Bone loss and human adaptation to lunar gravity p 51 A93-14002

**BONE MARROW**

- Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212
- A comparative analysis of the bone marrow cell composition in rats following a long-duration continuous or interrupted exposure to a hypogeomagnetic field p 240 A93-35213

**AFRRRI reports**

- [AD-A254581] p 49 A93-12649

**BONE MINERAL CONTENT**

- Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypertensive hypokinesia p 170 A93-28760

**BONES**

- Protection of Acanthopanax senticosus against suspension-induced bone loss in rats p 2 A93-13528
- Age-related bone changes p 93 A93-20655
- Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity p 168 A93-28736
- Microgravity and bone adaptation at the tissue level p 170 A93-28761
- Healing of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260
- Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703
- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets [AD-A254247] p 13 A93-10709

## BORON

- Assessment of programs in space biology and medicine  
[NASA-CR-190930] p 41 N93-13327  
Training, muscle fatigue and stress fractures  
[AD-A255277] p 54 N93-15006  
The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569

## BORON

- Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570

## BOTANY

- Anatomy and physiology of plant conductive systems  
[PB93-156032] p 245 N93-25877

## BOXES

- Glovebox design for Space Station Freedom Crew Health Care System  
[SAE PAPER 921139] p 292 A93-41326

## BRAIN

- Effect of DL-DOPA, L-5-HTP and pentobarbital sodium on brain encephalofluorographs in rats p 2 A93-13530  
A study of human brain somatosensory evoked potential and its application to man-machine-environment system engineering - Preliminary exploration of SEP in normal adult p 12 A93-13719  
Relationship between ERP and workload in manual control p 30 A93-13721  
Vagotropic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749  
Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500  
Dopamine release in rat striatum - Physiological coupling to tyrosine supply p 152 A93-27050  
Tyrosine - Effects on catecholamine release p 204 A93-33038  
The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241  
Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561  
Cognition in the brain: Investigations using positron emission tomography  
[AD-A254280] p 14 N93-10765  
Physiological analyses of the afferents controlling brain neurochemical systems p 14 N93-11146  
A core facility for the study of neurotoxins of biological origin p 50 N93-12945  
The neurochemical and neuropharmacological basis of motion sickness  
[NASA-CR-190957] p 50 N93-13061  
A weighted iterative algorithm for neuromagnetic imaging  
[DE92-040244] p 51 N93-13522  
Neuromagnetic investigations of cortical regions underlying short-term memory p 58 N93-14646  
Cognition and the brain  
[AD-A255483] p 59 N93-14788  
AFRR Reports --- Radiobiology p 80 N93-15965  
Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 N93-17817  
Adaptive filters for monitoring localized brain activity from surface potential time series p 217 N93-22774  
Sensory sensitivities and discriminations and their roles in aviation p 224 N93-23479  
Theory of synaptic plasticity in visual cortex  
[AD-A260052] p 224 N93-23960  
Biomagnetic localization from transient quasi-static events p 253 N93-25186  
Proceedings of Workshop 1: The Human Brainmap Database p 258 N93-25654  
Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate p 260 N93-26436  
[AD-A261593] p 260 N93-26436  
Neuromagnetic investigation of cortical regions underlying short-term memory p 261 N93-26521  
[AD-A261445] p 261 N93-26521  
Analysis of neural systems involved in modulation of memory storage p 283 N93-27654  
[AD-A262418] p 283 N93-27654  
The AFOSR Workshop on the Future of EEG and MEG  
[AD-A264338] p 335 N93-30160

## BRAIN CIRCULATION

- The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860  
Identification of degree of head injury caused by impact loads in dog and rabbit p 4 A93-13720  
Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533  
Cerebral blood flow - Comparison of ground-based and spacelift data and correlation with space adaptation syndrome p 87 A93-17553  
Infraslow bioelectric activity of the monkey's brain in the development of the high-pressure neural syndrome p 75 A93-18286  
Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293  
The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294  
Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens p 201 A93-32118  
Changes in the brain blood flow and respiration during psychoemotional stress p 252 A93-36723  
Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773  
Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122  
Acceleration-induced effects on baboon blood chemistry p 376 A93-49224  
Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295  
Cerebral autoregulation in microgravity p 173 N93-21112  
Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC)  
[AD-A264492] p 335 N93-30400
- BRAIN DAMAGE**  
Pharmacological defense of the brain during radiation damage - Some arguments p 240 A93-35217  
Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713  
Analysis of injuries following the crash of Avianca Flight 52 p 382 A93-49562  
Neuropsychological components of object identification  
[AD-A261449] p 259 N93-26347  
Secondary injury factors and preventative treatment  
[PB93-176014] p 283 N93-27409  
The AFOSR Workshop on the Future of EEG and MEG  
[AD-A264338] p 335 N93-30160
- BRAIN STEM**  
Effects of sustained +Gz stress on BAEP in waked rabbits p 10 A93-13531  
Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030  
Idaverine, an M2- vs. M3-selective muscarinic antagonist, does not prevent motion sickness in cats p 327 A93-44878  
Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m  
[DLR-FB-92-14] p 219 N93-24093
- BREADBOARD MODELS**  
Engineering verification of the biomass production chamber p 67 N93-13996
- BREAKING**  
Heating of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260
- BREATHING**  
Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)  
[AD-A253394] p 30 N93-10288
- BREATHING APPARATUS**  
A new protective breathing apparatus p 29 A93-13535  
Physiological effects of positive pressure ventilation  
[AD-A254809] p 49 N93-12751  
Statistically based decompression tables 8: Linear-exponential kinetics p 120 N93-17926  
Comparison of portable crewmember protective breathing equipment (CPBE) designs  
[DOT/FAA/AM-93/6] p 310 N93-27121
- BRIGHTNESS**  
Perception of lightness and brightness in complex patterns p 25 N93-10658  
[AD-A254093] p 25 N93-10658  
Discomfort glare from high-intensity discharge headlamps: Effects of context and experience  
[PB93-174720] p 336 N93-30659
- BRIGHTNESS DISTRIBUTION**  
Engineering the visibility of small features on electronic flight displays p 144 N93-19758

## SUBJECT INDEX

## BRINES

- Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols  
[NASA-CR-192570] p 359 N93-32354

## BROADBAND

- Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-191618] p 110 N93-15825

## BROADBAND AMPLIFIERS

- Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-193137] p 322 N93-28895

## BROKEN SYMMETRY

- Chiral symmetry-breaking in nonequilibrium chemical systems - The racemization influence p 269 A93-36563  
Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise p 269 A93-36564

## BROMIDES

- The effects of pyridostigmine bromide on visual performance p 87 A93-18034  
Toxicological investigations of flight accidents: Findings and methods p 126 N93-19695  
The acute inhalation toxicity of pyrolysis products of halon 1301  
[AD-A260874] p 254 N93-25629

## BROMINE COMPOUNDS

- Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704

## BRONCHI

- The chronic effects of JP-8 jet fuel exposure on the lungs  
[AD-A264162] p 334 N93-30153

## BUBBLES

- Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190

## BUILDINGS

- Survey of protocols for conducting indoor air quality investigations in large buildings  
[PB93-119865] p 194 N93-21215

## BURNS (INJURIES)

- Mechanisms of immune failure in burn injury p 15 N93-11285  
The effect of pain on task performance: A review of the literature  
[AD-A254336] p 59 N93-15216

## BUTTONS

- Gloved operator performance study  
[AD-A256894] p 104 N93-16048

## C

## C-135 AIRCRAFT

- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713

## CABIN ATMOSPHERES

- The dynamic mathematical model and digital simulation of the environmental control system p 61 A93-14319  
Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF)  
[SAE PAPER 921186] p 294 A93-41365  
Development of the carbon dioxide removal system blower used on Space Station Freedom  
[SAE PAPER 921188] p 294 A93-41367  
Conceptual design of a lunar base thermal control system p 68 N93-14003  
The relationship between environmental conditions and UH-60 cockpit temperature  
[AD-A255918] p 69 N93-14090  
Application of RADTRAN to estimation of doses to persons in enclosed spaces p 97 N93-17230  
[DE93-000758] p 97 N93-17230  
Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress  
[AD-A258552] p 148 N93-19955

## CAFFEINE

- Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption  
[AD-A250648] p 23 N93-11893  
Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894  
Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 N93-32269

## CALCIFEROL

- The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216

**CALCIUM METABOLISM**

- Principles of the organization of calcium metabolism p 7 A93-10124
- Age-related bone changes p 93 A93-20655
- Can the adult skeleton recover lost bone? p 93 A93-20656
- The mechanical control system of bone in weightless spaceflight and in aging p 94 A93-20657
- Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihistostatic hypokinesia p 170 A93-28760
- Predicting skeletal adaptation in altered gravity environments p 213 A93-30772
- Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545
- The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216
- Accumulation of calcium ions in the myocardial sarcoplasmic reticulum of restrained rats exposed to a pulsed electromagnetic field p 240 A93-35225
- Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats p 398 A93-55329

**CALCIUM PHOSPHATES**

- Active synthetic soil [NASA-CASE-MS-21954-1-NP] p 114 A93-19054

**CALORIC REQUIREMENTS**

- Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 A93-20384
- Trial of emergency ration of the Spanish Air Force p 368 A93-32247
- The effects of an antijet lag diet p 370 A93-32263

**CAMERAS**

- Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155
- Intensified CCD sensor applications for helmet-mounted displays p 228 A93-30064
- Dark cycle monitoring of biological specimens on Space Station Freedom [SAE PAPER 921393] p 274 A93-41551

**CANADIAN SPACE PROGRAM**

- Space life sciences overview p 158 A93-21074

**CANCER**

- Cancer risk assessment with intermittent exposure p 171 A93-28766
- On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858
- Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro [DE92-013510] p 13 A93-10626
- Clinical types of Hepatitis B p 15 A93-11286
- Digital mammography, cancer screening: Factors important for image compression p 221 A93-24551
- Potential human health effects associated with power frequency electric and magnetic fields [PB93-132678] p 221 A93-24590
- Measuring the metastatic potential of cancer cells p 244 A93-25566
- Immunoconjugates: Magic bullets for cancer therapy? p 253 A93-25567
- Automated system for early breast cancer detection in mammograms p 253 A93-25568

**CANOPIES (VEGETATION)**

- Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models [SAE PAPER 921355] p 306 A93-41514
- Minirion II system for precise control of the plant growth environment p 357 A93-46470
- Closed Ecological Life Support Systems (CELSS) Test Facility p 233 A93-22628

**CANTILEVER BEAMS**

- A preliminary structural analysis of space-based inflatable tubular frame structures p 313 A93-27849

**CAPE KENNEDY LAUNCH COMPLEX**

- Health services at the Kennedy Space Center p 154 A93-28711
- Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712
- Kennedy Space Center environmental health program p 166 A93-28713
- Environmental monitoring and research at the John F. Kennedy Space Center p 154 A93-28714
- Challenges of space medical operations and life sciences management p 155 A93-28716
- Toxic substances registry system: Index of material safety data sheets [NASA-TM-108582] p 172 A93-20998

**CAPILLARIES**

- Transcapillary fluid responses to lower body negative pressure p 380 A93-49292

**CAPILLARIES (ANATOMY)**

- Effect of simulated weightlessness on microvessel permeability of various organs in rabbits p 199 A93-30438

- Direct measurement of capillary blood pressure in the human lip p 279 A93-40550

**CAPILLARY FLOW**

- Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water [SAE PAPER 921268] p 300 A93-41438
- Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress p 401 A93-55165

**CARBAMATES (TRADENAME)**

- The effects of pyridostigmine bromide on visual performance p 87 A93-18034

**CARBOHYDRATE METABOLISM**

- Differential effects of insulin resistance on leucine and glucose kinetics in obesity p 152 A93-27224
- Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029
- Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178
- Regulation of the carbohydrate metabolism in humans residing in the North p 384 A93-51117
- Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle p 399 A93-55458
- Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates [AD-A262762] p 285 A93-28939
- Nutrition, Metabolic Disorders and Lifestyle of Aircrew [AGARD-CP-533] p 367 A93-32240

**CARBOHYDRATES**

- A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918
- Effects of dietary amino acids, carbohydrates, and choline on neurotransmitter synthesis p 204 A93-33031
- Effects of their nutrient precursors on the synthesis and release of serotonin, the catecholamines, and acetylcholine - Implications for behavioral disorders p 204 A93-33033
- Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 A93-20384
- Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 A93-32256

**CARBON**

- Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate [SAE PAPER 921313] p 303 A93-41475
- Methods development for total organic carbon accountability [NASA-CR-184438] p 40 A93-12949

**CARBON DIOXIDE**

- On a possible role of carbon dioxide in the genesis of the hyperbaric neural syndrome p 200 A93-31190
- Effects of CO<sub>2</sub> and photosynthetic photon flux on yield, gas exchange and growth rate of *Lactuca sativa* L. 'Waldmann's Green' p 397 A93-52723
- Resource capture by single leaves [DE92-015847] p 5 A93-10461
- The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO [DE92-019411] p 5 A93-11630
- Submarine Advanced Integrated Life Support system (SAILS) program [AD-A253564] p 32 A93-11812
- The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins [DE93-002940] p 115 A93-19751
- Membrane technology: A search for membranes for submarine atmosphere control p 266 A93-25904
- Regulation of alternative CO<sub>2</sub> fixation pathways in prokaryotic and eucaryotic photosynthetic organisms [DE93-012109] p 276 A93-29181
- Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 A93-29216

**CARBON DIOXIDE CONCENTRATION**

- The life span of the biosphere revisited p 149 A93-21847
- Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697
- Recent regenerative ECLSS technology developments in Europe [SAE PAPER 921332] p 304 A93-41493
- Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design [SAE PAPER 921356] p 307 A93-41515
- The Minirion system for growth of small plants under controlled environment conditions p 358 A93-46471

- The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO [DE92-019411] p 5 A93-11630

- The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins [DE93-002940] p 115 A93-19751

**CARBON DIOXIDE REMOVAL**

- Development of the carbon dioxide removal system blower used on Space Station Freedom [SAE PAPER 921188] p 294 A93-41367
- Sabatier carbon dioxide reduction system for Space Station Freedom [SAE PAPER 921189] p 294 A93-41368
- Comparative test data assessment and simplified math modelling for Sabatier CO<sub>2</sub> reduction subsystem [SAE PAPER 921228] p 296 A93-41402
- Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations [SAE PAPER 921231] p 297 A93-41405
- Development of a regenerable metal oxide sheet matrix CO<sub>2</sub> removal system [SAE PAPER 921298] p 302 A93-41463
- Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents: preprototype hardware development and testing [SAE PAPER 921299] p 303 A93-41464
- Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air [SAE PAPER 921321] p 304 A93-41483
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 A93-17971
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers [NASA-CR-177602] p 149 A93-20065
- Technologies for ECLSS evolution p 311 A93-27720
- JSC ECLSS R/T program overview p 312 A93-27725

**CARBON FIBERS**

- Finite element analysis of a composite artificial ankle p 174 A93-22189

**CARBON ISOTOPES**

- Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake p 38 A93-16544

**CARBON MONOXIDE**

- Heart and lung alterations in neonatal rats exposed to CO or high altitude p 77 A93-20027
- Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide p 271 A93-39707
- Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations [DOT/FAA/AM-93/7] p 274 A93-27152
- Carbon monoxide exposure of subjects with documented cardiac arrhythmias [PB93-179943] p 337 A93-30890

**CARBON MONOXIDE POISONING**

- Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations [DOT/FAA/AM-93/7] p 274 A93-27152

**CARBON TETRACHLORIDE**

- Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents [AD-A255696] p 42 A93-14557

**CARBON 14**

- New techniques for positron emission tomography in the study of human neurological disorders [DE93-002098] p 95 A93-15900

**CARBONACEOUS CHONDRITES**

- The origin of the polycyclic aromatic hydrocarbons in meteorites p 110 A93-17983
- Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces --- space biological evolution p 411 A93-53286
- Carbonaceous chondrites and the origin of life p 412 A93-55997

**CARBONYL COMPOUNDS**

- Biological conversion of synthesis gas culture development [DE92-001279] p 6 A93-12482

**CARBOXYHEMOGLOBIN**

- Carboxyalkylated hemoglobin as a potential blood substitute [AD-A252329] p 22 A93-11561

Carbon monoxide exposure of subjects with documented cardiac arrhythmias  
[PB93-179943] p 337 N93-30890

**CARCINOGENS**

Cancer risk assessment with intermittent exposure  
p 171 A93-28766  
Single particle effects, Biostack, and risk evaluation -  
Studies on the radiation risk from Galactic cosmic rays  
p 202 A93-32243  
Gene transcription and electromagnetic fields  
[DE93-010854] p 276 N93-28848

**CARDIAC OUTPUT**

Pulmonary diffusing capacity, capillary blood volume,  
and cardiac output during sustained microgravity  
p 386 A93-52617  
Effect of hemorrhage on cardiac output, vasopressin,  
aldosterone, and diuresis during immersion in men  
[NASA-TM-103949] p 6 N93-12014

**CARDIAC VENTRICLES**

Hypoxia-induced downregulation of beta-adrenergic  
receptors in rat heart p 37 A93-14973

**CARDIOGRAPHY**

Value of frequency domain correlative cardiology  
(FCG) to early diagnosis of coronary heart disease  
p 10 A93-13705  
Cardiovascular stress test with non-invasive  
techniques p 221 N93-24399

**CARDIOLOGY**

Civil aviation and cardiology - Admission rules and  
follow-up of the technical flying personnel of TAP-Air  
Portugal p 164 A93-28699

**CARDIOVASCULAR SYSTEM**

The responses of cardiovascular during head-up tilt plus  
lower body negative pressure p 9 A93-11690  
The effect of low-intensity electromagnetic  
millimeter-wave radiation on the rat cardiovascular  
system p 2 A93-12861  
Application of system identification to research on  
cardiovascular regulative function p 3 A93-13544  
Study of the relationship between therapeutic effects  
and control parameters of ECP using a simulation  
method p 11 A93-13716  
Role of atrial natriuretic peptide in systemic responses  
to acute isotonic volume expansion p 44 A93-14968  
Influence of graded dehydration on hyperthermia and  
cardiovascular drift during exercise p 44 A93-14971  
Rat cardiovascular responses to whole body suspension  
- Head-down and non-head-down tilt p 37 A93-14974  
Hematological changes in space microgravity  
environments p 46 A93-15528  
The cardiovascular system p 46 A93-15530  
Echocardiographic evaluation of the cardiovascular  
effects of short-duration spaceflight p 87 A93-17551  
Preclinical cardiovascular and neurological  
occupation-related pathological symptoms in helicopter  
pilots p 91 A93-18416  
Psychophysiological studies of acute hypoxic hypoxia  
p 91 A93-18417  
Method of selection of astronauts cardiovascular  
regulative function under simulated weightlessness  
p 91 A93-19995  
Posture and the circulation - The age effect  
p 93 A93-20653  
Cardiovascular physiology in space flight  
p 93 A93-20654  
Cardiovascular responses to lower body negative  
pressure in trained and untrained older men  
p 115 A93-21686  
Blood volume reduction counteracts fluid shifts in water  
immersion p 118 A93-25206  
Increased release of brain serotonin reduces  
vulnerability to ventricular fibrillation in the cat  
p 151 A93-26500  
Influence of posture and prolonged head-down tilt on  
cardiovascular reflexes p 161 A93-28677  
Cardiovascular response to lower body negative  
pressure before, during, and after ten days head-down  
tilt bedrest p 162 A93-28681  
The effects of a 10-day period of head-down tilt on the  
cardiovascular responses to intravenous saline loading  
p 163 A93-28686  
Head-down tilt bedrest: HDT'88 - An international  
collaborative effort in integrated systems physiology  
p 164 A93-28689  
Cardiovascular physiology - Effects of microgravity  
p 166 A93-28719  
Cardiovascular responses to upright tilt at a simulated  
altitude of 3,700 m in men p 212 A93-30281  
Cardiovascular responses during recovery from exercise  
and thermal stress p 212 A93-30282  
Cardiovascular problems during space flight  
p 213 A93-30445  
Hypertension and the probability of an incapacitating  
event over a defined period - Impact of treatment  
p 215 A93-32777

Alanine increases blood pressure during hypotension  
p 203 A93-33027

Hemodynamic status of humans during a graded  
orthostatic test p 248 A93-35221  
Informative value of the rerespiration method for  
evaluating the functional resources of the cardiorespiratory  
system during the simulation of certain flight factors  
p 248 A93-35222

Features of the effect of hypokinesia on cardiac activity  
in rats with high and low spontaneous motor activity  
p 240 A93-35224

Functional state of the cardiovascular system of the  
cosmonauts of the sixth primary mission on the Mir  
station p 249 A93-35238

Ultrasonic location of gas bubbles in the vascular bed  
of a person working in a space suit p 262 A93-35239

Efficiency of using iterative hypoxic hypercapnic stimuli  
for enhancing cardiorespiratory reserves under the effect  
of radial accelerations p 249 A93-35244

Norepinephrine content in discrete brain areas and  
neurohypophyseal vasopressin in rats after a 9-d spaceflight  
(SLS-1) p 273 A93-41167

Effects of dynamic exercise on cardiovascular regulation  
during lower body negative pressure p 281 A93-41168

Baroreflex function and cardiac structure with moderate  
endurance training in normotensive men p 332 A93-44182

Changes in the central hemodynamics under  
anorthostasis in humans with different blood circulation  
types and physical training levels p 359 A93-46967

Arterial pulse pressure and vasopressin release in  
humans during lower body negative pressure p 360 A93-47096

Hemodynamic effects of altitude exposure and oxygen  
administration in chronic obstructive pulmonary disease  
p 383 A93-49571

Prediction of maximal oxygen uptake from submaximal  
exercise testing in aerobically fit and nonfit men  
p 385 A93-52304

Review of the space medico-engineering research in  
China [AAS PAPER 91-623] p 402 A93-55802

Metabolic factors influencing myocardial recovery from  
acidosis (CiC3) [AD-A252376] p 14 N93-10796

Assessment of programs in space biology and  
medicine [NASA-CR-190930] p 41 N93-13327

AFRRRI Reports --- Radiobiology [AD-A257231] p 80 N93-15965

Nifedipine for treatment of high altitude pulmonary  
edema [AD-A256959] p 95 N93-16187

Systemic and pulmonary hypertension after resuscitation  
with cell-free hemoglobin [AD-A258185] p 120 N93-17900

A review of models of the human temperature regulation  
system [AD-A258023] p 120 N93-17918

Publications of the Space Physiology and  
Countermeasures Program, Cardiopulmonary Discipline:  
1980-1990 [NASA-CR-4475] p 123 N93-18376

Cardiopulmonary discipline science plan [NASA-TM-108040] p 125 N93-19648

Monitoring of cardiovascular parameters during the  
AustroMir space flight p 220 N93-24367

MAC to VAX connectivity: Heart rate spectral analysis  
system p 254 N93-25594

Vascular uptake of rehydration fluids in hypohydrated  
men at rest and exercise [NASA-TM-103942] p 255 N93-26133

The physiological limitations of man in the high G  
environment p 319 N93-28861

Lipodystrophies in the French military flight crew  
p 362 N93-32249

Blood lipids in aircrew recruits and in RAF aviators  
p 362 N93-32251

Cardiovascular risk factors in an Italian Air Force  
population: Preliminary report p 362 N93-32252

Cardiovascular Risk Factors (CVRF) in Spanish pilots  
with coronary artery disease demonstrated by angiographic  
studies p 362 N93-32253

Results and management of pathological lipoprotein  
concentrations and other cardiovascular risk factors in  
military pilots of the German Federal Armed Forces  
p 363 N93-32254

Biological parameters and cardiovascular risk factors  
with the flying personnel of the Belgian Armed Forces  
p 370 N93-32260

**CAROTID SINUS BODY**

Modulation of respiratory responses to carotid sinus  
nerve stimulation by brain hypoxia p 79 A93-20038

Influence of ten-day head-down bedrest on human  
carotid baroreceptor-cardiac reflex function p 161 A93-28678

Microgravity and orthostatic intolerance - Carotid  
hemodynamics and peripheral responses p 278 A93-39716

Response of genioglossus EMG activity to passive tilt  
in men p 279 A93-41118

**CAROTID SINUS REFLEX**

Carotid-cardiac baroreflex response and LBNP tolerance  
following resistance training p 164 A93-28696

Enhanced carotid-cardiac baroreflex response and  
elimination of orthostatic hypotension 24 hours after acute  
exercise in paraplegics p 216 A93-32781

Response of genioglossus EMG activity to passive tilt  
in men p 279 A93-41118

**CASE HISTORIES**

CSERIAC case studies in ergonomics information  
analysis --- for crew systems p 349 A93-42850

**CASUALTIES**

Analysis of injuries following the crash of Avianca Flight  
52 p 382 A93-49562

**CATALOGS (PUBLICATIONS)**

Space Station Freedom biomedical monitoring and  
countermeasures: Biomedical facility hardware catalog  
[NASA-CR-193156] p 246 N93-26708

**CATALYSIS**

Ribozymes - A distinct class of metalloenzymes  
p 398 A93-54163

Group II intron RNA catalysis of progressive nucleotide  
insertion - A model for RNA editing p 398 A93-55292

**CATALYSTS**

Isolation of new ribozymes from a large pool of random  
sequences p 400 A93-56548

**CATALYTIC ACTIVITY**

Atrial natriuretic peptide degradation by CPA47 cells -  
Evidence for a divalent cation-independent cell-surface  
proteolytic activity p 155 A93-28726

**CATARACTS**

Accelerated heavy particles and the lens. VIII -  
Comparisons between the effects of acute low doses of  
iron ions (190 keV/microns) and argon ions (88  
keV/microns) p 216 A93-32784

A fiber optic probe for the detection of cataracts  
p 254 N93-25593

**CATECHOLAMINE**

The effect of the activation of the sympatho-adrenal  
system on catecholamine inactivation in rat lungs  
p 2 A93-12864

Effect of high temperature on the beta-adrenoreceptor  
activity and the catecholamine synthesis p 39 A93-16750

Dopamine release in rat striatum - Physiological coupling  
to tyrosine supply p 152 A93-27050

Relationship between pituitary ACTH content and  
hypothalamic catecholamines in the rat p 203 A93-33028

Effects of dietary amino acids, carbohydrates, and  
choline on neurotransmitter synthesis p 204 A93-33031

Tyrosine - Effects on catecholamine release  
p 204 A93-33038

Endocrinology of space/motion sickness  
p 403 A93-55935

**CATHETERIZATION**

The influence of dietary counseling and cardiac  
catheterization on lipid profiles in American military  
aviators p 369 N93-32259

**CATHODE RAY TUBES**

Low-cost monochrome CRT helmet display  
p 228 A93-30061

Advances in miniature projection CRTs for helmet  
displays p 229 A93-30066

Comparison of CRT display measurement techniques  
p 229 A93-30067

The locator system for wandering individuals  
[NASA-TM-104754] p 31 N93-11649

Low-cost helmet-mounted displays  
[AD-A262616] p 317 N93-28479

**CATHODES**

Submarine Advanced Integrated Life Support system  
(SAILS) program [AD-A253564] p 32 N93-11812

**CATIONS**

Changes in the osmolality, monovalent cation  
concentration, and protein structure of blood plasma under  
extreme conditions p 200 A93-31188

**CAVES**

Evolving concepts of lunar architecture: The potential  
of subsele development p 107 N93-17447

**CELESTIAL BODIES**

Life in and from space p 237 N93-24373

**CELL DIVISION**

Early amphibian (anuran) morphogenesis is sensitive to  
novel gravitational fields p 156 A93-28745



## SUBJECT INDEX

- Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765
- Altering the position of the first horizontal cleavage furrow of the amphibian (*Xenopus*) egg reduces embryonic survival p 272 A93-39717
- Nerves and tissue repair p 53 N93-14535
- [AD-A255299] p 53 N93-14535
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- CELL MEMBRANES (BIOLOGY)**
- Purification and properties of an ATPase from *Sulfolobus solfataricus* p 201 A93-32115
- Ion transport across membranes under exposure of the organism to ionizing radiation --- Russian book [ISBN 5-12-001601-4] p 243 A93-35679
- Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557
- Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558
- Ozone - A new aspect of its effect on microorganisms p 398 A93-54971
- CELLS**
- Caenorhabditis elegans* - A model system for space biology studies p 80 A93-20665
- CELLS (BIOLOGY)**
- Organic models of interstellar grains p 35 A93-11847
- The current status and prospects in the study of cell physiology under microgravity p 38 A93-16001
- Model for the computation of self-motion in biological systems p 97 A93-17673
- Altered cell function in microgravity p 79 A93-20660
- The pituitary - Aging and spaceflown rats p 79 A93-20661
- Short-term microgravity to isolate graviperception in cells p 111 A93-21901
- On a possible role of carbon dioxide in the genesis of the hyperbaric neural syndrome p 200 A93-31190
- Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission) p 200 A93-32071
- Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate p 214 A93-32120
- Mechanical forces and their second messengers in stimulating cell growth in vitro p 204 A93-33043
- Two circadian oscillators in one cell p 239 A93-34518
- Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenous layer of rat testes p 240 A93-35229
- Possible biological significance of the curvature of equipotential surfaces of gravity-force tidal variations p 324 A93-43025
- Response of a mouse hybridoma cell line to heat shock, agitation, and sparging p 328 A93-44928
- Intracellular proteins produced by mammalian cells in response to environmental stress p 328 A93-44929
- Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934
- Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*) p 329 A93-44941
- Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (*Avena sativa*) p 358 A93-46472
- The internal dynamics of slowly rotating biological systems p 375 A93-49208
- The fast rotating clinostat - A history of its use in gravitational biology and a comparison of ground-based and flight experiment results p 376 A93-49212
- Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214
- Method for culturing mammalian cells in a perfused bioreactor [NASA-CASE-MSC-21293-2] p 4 N93-10109
- Method for culturing mammalian cells in a horizontally rotated bioreactor [NASA-CASE-MSC-21294-2] p 5 N93-10110
- Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835
- Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146
- Establishing laboratory standards for biological flight experiments [NASA-CR-184402] p 40 N93-12901

- Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 N93-13327
- Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 N93-13449
- Nerves and tissue repair [AD-A255299] p 53 N93-14535
- Mechanisms of microwave induced damage in biologic materials [AD-A255799] p 42 N93-14648
- High density cell culture system [NASA-CASE-MSC-22060-1] p 114 N93-19037
- Computer based analysis and synthesis of retinal function [AD-A260514] p 221 N93-24420
- Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 N93-24763
- Measuring the metastatic potential of cancer cells p 244 N93-25566
- Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764
- Comparative mutagenesis of human cells in vivo and in vitro [DE93-012269] p 276 N93-28651
- Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A264829] p 336 N93-30613
- The Gordon Research Conference on Pineal Cell Biology [AD-A264840] p 337 N93-30904
- Investigation of laser-induced retinal damage [AD-A264096] p 338 N93-31094
- Neurophysiological analysis of circadian rhythm entrainment [AD-A264681] p 361 N93-32018
- Mechanisms of microwave induced damage in biologic materials [AD-A264415] p 358 N93-32035
- CENOZOIC ERA**
- First skulls of the early Eocene primate *Shoshonius cooperi* and the anthropoid-tarsier dichotomy p 202 A93-32670
- CENTER OF MASS**
- An automated method for determining mass properties [AD-A259924] p 236 N93-24441
- Helmets and head and neck dynamics under whole-body vibration p 264 N93-25531
- CENTRAL NERVOUS SYSTEM**
- Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287
- Combined effect of head-down tilt and gamma rays on the higher nervous activity of rats p 242 A93-35262
- Röntgenophosphene as an indicator of the radiation excitability of the central nervous system p 325 A93-43078
- Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333
- Motion and space sickness [ISBN 0-8493-4703-3] p 402 A93-55929
- The central nervous connections involved in motion induced emesis p 399 A93-55931
- Neurochemistry and pharmacology of motion sickness in nonhuman species p 399 A93-55934
- A core facility for the study of neurotoxins of biological origin [AD-A254359] p 50 N93-12945
- Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m [DLR-FB-92-14] p 219 N93-24093
- Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238
- Secondary injury factors and preventative treatment [PB93-176014] p 283 N93-27409
- Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 N93-30882
- CENTRAL NERVOUS SYSTEM STIMULANTS**
- Effects of dextromethamphetamine on subjective fatigue [AD-A258252] p 119 N93-17822
- CENTRIFUGAL FORCE**
- The Centrifuge Facility Life Sciences Glovebox configuration study [SAE PAPER 921158] p 293 A93-41341
- CENTRIFUGAL PUMPS**
- Effects of air bubble contamination in recirculating water loop [SAE PAPER 921282] p 302 A93-41450
- CENTRIFUGES**
- Centrifuges - Their development and use in gravitational biology p 376 A93-49210

## CEREBRAL VASCULAR ACCIDENTS

- Centrifuges - Evolution of their uses in plant gravitational biology and new directions for research on the ground and in spaceflight p 376 A93-49211
- Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 N93-13327
- Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458
- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400
- Rotational speed control p 365 N93-31457
- Vibration isolation p 365 N93-31458
- CENTRIFUGING STRESS**
- Myocardial infarction occurring at the conclusion of centrifuge training in a 37-year-old aviator p 89 A93-18044
- The effect of G-LOC on psychomotor performance and behavior p 130 A93-25205
- Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- CERAMICS**
- Development of physical and mathematical models for the Porous Ceramic Tube Plant Nutrifcation System (PCTPNS) [NASA-TM-107551] p 4 N93-10085
- The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569
- CEREBELLUM**
- Neurophysiology of motion sickness p 399 A93-55932
- CEREBRAL CORTEX**
- Cortical localization of cognitive function by regression of performance on event-related potentials p 9 A93-10337
- Observation of change in cytochrome oxidase content of cerebral cortex in rat under +Gz stress p 3 A93-13543
- Effects of antinotion sickness drug mixture B on ultrastructures of cerebral and cerebellar cortexes in suspended rabbits p 10 A93-13704
- The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys p 75 A93-18289
- Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain p 77 A93-18300
- Normalization of cell responses in cat striate cortex p 154 A93-28700
- A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727
- Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743
- Half-squaring in responses of cat striate cells p 157 A93-28748
- Persistent blockade of potassium-evoked serotonin release from rat frontocortical terminals after fluoxetine administration p 202 A93-32125
- Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness p 239 A93-35211
- Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773
- The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966
- Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566
- Cognition and the brain [AD-A255483] p 59 N93-14788
- Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962
- The role of central monoaminergic systems in arousal and selective attention [AD-A258500] p 122 N93-18264
- Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238
- Duration of alpha suppression increases with angle in a mental rotation task [AD-A261592] p 260 N93-26435
- Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate [AD-A261593] p 260 N93-26436
- Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 N93-26521
- CEREBRAL VASCULAR ACCIDENTS**
- Effects of oxygen on regulation of cerebral blood flow in rabbits adapted to hypoxia p 3 A93-13545



## CEREBROSPINAL FLUID

### CEREBROSPINAL FLUID

Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030

### CEREBRUM

Statistical analysis of the human strangulation experiments: Comparison to Gz-induced loss of consciousness p 54 A93-14789

New techniques for positron emission tomography in the study of human neurological disorders [AD-A255485] p 95 A93-15900

### CERTIFICATION

Guide for aviation medical examiners [PB92-219690] p 172 A93-21047  
Helicopter simulation: An aircrew training and qualification perspective p 342 A93-30676

### CHANGE DETECTION

Auditory perception [AD-A255061] p 23 A93-12469

### CHANNELS (DATA TRANSMISSION)

Headphone localization of speech stimuli p 176 A93-27143  
Advanced cockpit-mission and image management p 144 A93-19760

### CHARACTERIZATION

Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 A93-21795

### CHARGE COUPLED DEVICES

Intensified CCD sensor applications for helmet-mounted displays p 228 A93-30064

### CHARGED PARTICLES

Radiation damage to DNA [DE92-015760] p 5 A93-10834

### CHARTS

Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 A93-15968

### CHEMICAL ANALYSIS

A lunar-based chemical analysis laboratory [ISBN 0-937194-25-5] p 39 A93-17426  
Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL) p 39 A93-17429  
Controlled Ecological Life Support System - CELSS p 62 A93-17432

Chemical and toxicological assessment of environmental contaminants in the Lunar-Chemical Analysis Laboratory p 62 A93-17433  
Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439  
Detection of genetic effects of excess near-ultraviolet irradiation under exobiology conditions p 39 A93-17446

Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy p 155 A93-28725  
Transcutaneous analyte measuring methods [AD-A262861] p 333 A93-29509

### CHEMICAL ATTACK

Effects of error-proofing and chemical/biological/radiation protective glove use on touch panel operation p 186 A93-27152

### CHEMICAL BONDS

Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection p 397 A93-52878

### CHEMICAL COMPOSITION

Protein composition of the blood plasma of cosmonauts after lengthy orbital flights p 249 A93-35243  
The development of an atmosphere composition monitor for the Environmental Control and Life Support System [SAE PAPER 921149] p 292 A93-41333  
Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570  
Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates [DE93-007677] p 207 A93-22913

### CHEMICAL DEFENSE

Pharmacological defense of the brain during radiation damage - Some arguments p 240 A93-35217  
Physiological stress from chemical defense clothing and equipment [AD-A255786] p 51 A93-14028

### CHEMICAL EFFECTS

Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers p 168 A93-28739  
Cancer risk assessment with intermittent exposure p 171 A93-28766

### CHEMICAL EQUILIBRIUM

Regenerable biocide delivery unit, volume 2 [NASA-CR-185701-VOL-2] p 275 A93-27360

### CHEMICAL EVOLUTION

Experimental studies on the origin of the genetic code and the process of protein synthesis - A review update p 73 A93-17822

An efficient lightning energy source on the early earth p 73 A93-17823

The evolution of aminoacyl-tRNA synthetases, the biosynthetic pathways of amino acids and the genetic code p 73 A93-17825

Comet impacts and chemical evolution on the bombarded earth p 109 A93-17980

Why are hydrothermal systems proposed as plausible environments for the origin of life? p 73 A93-18001

Hydrothermal systems - Their varieties, dynamics, and suitability for prebiotic chemistry p 73 A93-18002

Chemical environments of submarine hydrothermal systems --- supporting abiogenetic theory p 74 A93-18005

Chemical markers of prebiotic chemistry in hydrothermal systems p 74 A93-18006

An experimental approach to chemical evolution in submarine hydrothermal systems p 74 A93-18008

Future research --- abiogenesis in hydrothermal systems p 74 A93-18010

Photo and thermal reactions of ferrous hydroxide --- formation of hydrogen in Archean ocean relevant to chemical origin of life p 269 A93-36561

On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791

Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792

Flavine-dependent processes in model prebiological systems p 372 A93-47125

Carbonaceous chondrites and the origin of life p 412 A93-55997

A model for the prebiotic synthesis of peptides which throws light on the origin of the genetic code and the observed chirality of life p 412 A93-56000

Self-programming of matter and the evolution of proto-biological organizations [DE92-015244] p 5 A93-10628

Hydrothermal organic synthesis experiments [NASA-CR-191257] p 41 A93-13457

Overview: Exobiology in solar system exploration p 112 A93-18546

The solar system: Importance of research to the biological sciences p 113 A93-18547

The Moon: Biogenic elements p 113 A93-18548

Exobiology and terrestrial life p 237 A93-24405

**CHEMICAL REACTIONS**

Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise p 269 A93-36564

The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs p 325 A93-43795

Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces --- space biological evolution p 411 A93-53286

Biological conversion of synthesis gas culture development [DE92-001279] p 6 A93-12482

**CHEMICAL WARFARE**

The effect of wearing protective chemical warfare combat clothing on human performance p 230 A93-30287

The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 A93-12491

**CHEMORECEPTORS**

Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679

Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188

**CHEMOTHERAPY**

Bupirone blocks cisplatin-induced emesis in cats p 324 A93-42668

Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 A93-11283

Early markers of HIV infection and subclinical disease progression p 17 A93-11296

Communicable diseases: A major burden of morbidity and mortality p 18 A93-11300

Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 A93-11307

Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems p 20 A93-11310

Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine p 20 A93-11311

The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 A93-11312

Asthma in aircrew: Assessment, treatment and disposition p 21 A93-11315

Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients [NASA-CR-192382] p 172 A93-20736

Measuring the metastatic potential of cancer cells p 244 A93-25566

Immunoconjugates: Magic bullets for cancer therapy? p 253 A93-25567

Secondary injury factors and preventative treatment [PB93-176014] p 283 A93-27409

### CHILDREN

Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030

The psychosocial adaptation of children in space - A speculation p 388 A93-50338

Suited for spacewalking: A teacher's guide with activities [NASA-EP-279] p 65 A93-13692

### CHIPS (ELECTRONICS)

Silicon neuron [AD-A255091] p 50 A93-12756

Neural network retinal model real time implementation [AD-A255652] p 52 A93-14210

### CHIRAL DYNAMICS

Chiral-symmetry-breaking in nonequilibrium chemical systems - The racemization influence p 269 A93-36563

Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise p 269 A93-36564

**CHLOROFLUOROCARBONS**

Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers p 168 A93-28739

### CHLOROPHYLLS

Modification of yield and chlorophyll content in leaf lettuce by HPS radiation and nitrogen treatments p 328 A93-44880

New approaches to the measurement of chlorophyll, related pigments and productivity in the sea [NASA-CR-190879] p 42 A93-13612

Primary charge separation in isolated photosystem 2 reaction centers [DE92-041128] p 82 A93-17189

Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing [DE93-006411] p 210 A93-24028

### CHLOROPLASTS

Nitrogen control of chloroplast development and differentiation [DE92-017392] p 39 A93-12768

Kinetic studies of interfacial photocurrents in planitized chloroplasts [DE93-002344] p 211 A93-25104

### CHOLERA

Immunization of personnel traveling to a destination in tropical countries: French position p 19 A93-11304

### CHOLESTEROL

Cases from the aerospace medicine resident's teaching file: Case No.51 - Hypercholesterolemia and heme positive stools in a 69-year-old aviator (clinical conference) p 165 A93-28702

Changes in the phospholipid and cholesterol content of rat tissues during adaptation to high altitude at different environmental temperatures p 358 A93-47100

Lipodystrophies in the French military flight crew p 362 A93-32249

Lipidemic profile of Hellenic Airforce officers p 362 A93-32250

Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 A93-32256

### CHOLINE

Effects of dietary amino acids, carbohydrates, and choline on neurotransmitter synthesis p 204 A93-33031

### CHOLINERGICS

Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743

### CHONDRITES

Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561

### CHROMATOGRAPHY

Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 A93-19399

### CHROMIUM ISOTOPES

Freeze-dried human red blood cells [AD-A253295] p 14 A93-11193

### CHROMOSOMES

Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster* p 1 A93-11691

## SUBJECT INDEX

Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation [DE92-018066] p 5 N93-10974

### CHRONIC CONDITIONS

Age and length of service of flight personnel in the case of chronic diseases p 248 A93-35227  
Occupational health problems in aviation medicine p 252 A93-36743  
Effect of chronic hypoxia on hypoxic ventilatory response in awake rats p 323 A93-42187  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191  
Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude p 326 A93-44181

### CIRCADIAN RHYTHMS

Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658  
Sleep and circadian rhythms p 94 A93-20659  
Response of the circadian system to 6 deg head-down tilt bed rest p 117 A93-24045  
Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706  
Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276  
Two circadian oscillators in one cell p 239 A93-34518  
The prediction of the adaptation of circadian rhythms to rapid time zone changes p 278 A93-39714  
Pre-adaptation to shiftwork in space p 386 A93-52403

Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses p 13 N93-10661  
[AD-A254129] p 13 N93-10661  
NASA Space Human Factors Program [NASA-TM-108005] p 31 N93-10890

Neurochemical control of circadian rhythms [AD-A255054] p 50 N93-13116  
Sleep inertia: Is there a worst time to wake up? [AD-A256602] p 52 N93-14240

Bright light delivery system [NASA-CASE-MFS-28723-1] p 96 N93-17058

The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm p 122 N93-18292

The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm [AD-A258156] p 132 N93-18294

Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms p 217 N93-23459

Control and circadian behavior by transplanted suprachiasmatic nuclei [AD-A264553] p 335 N93-30382

Molecular approach to hypothalamic rhythms [AD-A264438] p 335 N93-30421

Photoreceptors regulating circadian behavior: A mouse model [AD-A264881] p 337 N93-30908

Melatonin, the pineal gland, and circadian rhythms [AD-A264099] p 337 N93-31061

Organization of the human circadian system [AD-A264675] p 361 N93-32015

Neurophysiological analysis of circadian rhythm entrainment [AD-A264681] p 361 N93-32018

Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267

### CIRCUITS

Investigation into the common mode rejection ratio of the physiological signal conditioner circuit p 245 N93-26073

### CIRCULATORY SYSTEM

Effects of positive acceleration on the microcirculation of rabbit conjunctiva, mesentery, skin, and pia mater p 4 A93-13709

Diurnal rhythmicity of human orthostatic stability p 250 A93-35253

STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission [NASA-TM-108034] p 80 N93-15823

### CIVIL AVIATION

High-speed civil transport - Advanced flight deck challenges [AIAA PAPER 92-4231] p 28 A93-13357

Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416

The efficiency of a prophylactic-rehabilitational treatment of civil-aviation flight crews p 91 A93-18415

Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training p 98 A93-18773

Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal p 164 A93-28699

Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762

Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775

Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport [SAE PAPER 921133] p 291 A93-41321

Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664

### CLASSIFICATIONS

Recent developments in U.S. Air Force pilot candidate selection and classification p 97 A93-18046  
Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystriocomorphous rodent (Mammalia: Rodentia) p 328 A93-44903

Computing with neural maps: Application to perceptual and cognitive function [AD-A264056] p 341 N93-30033

### CLASSIFYING

Synthetic experience - A proposed taxonomy p 390 A93-49398

### CLIMATE CHANGE

The effects of prolonged growth in elevated CO2 concentrations in the field on the amounts of different leaf proteins [DE93-002940] p 115 N93-19751

### CLIMBING FLIGHT

HUD climb/dive ladder configuration and unusual attitude recovery p 185 A93-27129

### CLINICAL MEDICINE

Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442

Frontier Symposium on Clinical Pharmacology in Space, 10th, Houston, TX, May 10, 11, 1990, Proceedings p 83 A93-17527

First intramuscular administration in the U.S. space program --- of motion sickness drugs p 84 A93-17534

Pharmacologic considerations for Shuttle astronauts p 85 A93-17537

Space medicine - Answering the challenge p 87 A93-17552

Hypokinesia and weightlessness: Clinical and physiologic aspects --- Book [ISBN 0-8236-2415-3] p 87 A93-17897

Flight physiology - Clinical considerations p 164 A93-28690

The clinical chemistry and immunology of long-duration space missions p 169 A93-28754

New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774

Hyperbaric treatment operations aboard Space Station Freedom [SAE PAPER 921142] p 292 A93-41328

A modified method for investigating gastric secretion in aviation medical examination p 359 A93-45692

Coccidioidomycosis - A persistent threat to deployed populations p 380 A93-49228

Risk assessment and clinical aeromedical decision-making p 385 A93-52305

Remote medical systems for the human exploration of space [AAS PAPER 91-321] p 401 A93-54309

Clinical types of Hepatitis B p 15 N93-11286

Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287

Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations p 15 N93-11288

Silent HIV infection p 16 N93-11293

Early markers of HIV infection and subclinical disease progression p 17 N93-11296

Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297

Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate p 19 N93-11306

Phadiatop: A screening test for inhalant allergy p 21 N93-11313

A health care system for the Space Station [NASA-TM-108093] p 65 N93-13571

Automated system for early breast cancer detection in mammograms p 253 N93-25568

DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field [ETN-93-93799] p 284 N93-28469

Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 N93-28835

### CLOSED CIRCUIT TELEVISION

The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 N93-26082

### CLOSED CYCLES

Plasma reactor waste management systems p 68 N93-14000

Conceptual design of a lunar base thermal control system p 68 N93-14003

### CLOSED ECOLOGICAL SYSTEMS

Human support for Mars exploration - Issues and approaches p 27 A93-12077

Controlled Ecological Life Support System - CELSS p 62 A93-17432

Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms p 101 A93-18418

Controlled Ecological Life Support System (CELSS) modeling p 137 A93-25308

Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715

Bioregenerative life support as self-sustaining ecosystem in space p 231 A93-32073

Recycling and source reduction for long duration space habitation [SAE PAPER 921121] p 290 A93-41313

Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921122] p 291 A93-41314

Biosphere 2 - Overview of system performance during the first nine months [SAE PAPER 921129] p 291 A93-41317

Crop interactions in polyculture and their implications for CELSS design [SAE PAPER 921197] p 295 A93-41373

A trade study method for determining the design parameter of CELSS subsystems [SAE PAPER 921198] p 295 A93-41374

An approach to the functional optimization of the CELSS Test Facility [SAE PAPER 921199] p 295 A93-41375

European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed [SAE PAPER 921200] p 295 A93-41376

Functions simulation model of integrated regenerable life support system [SAE PAPER 921201] p 295 A93-41377

Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight [SAE PAPER 921232] p 297 A93-41406

Development of the nitrogen fixation system for CELSS [SAE PAPER 921238] p 297 A93-41411

Concept of waste transferring mechanisms [SAE PAPER 921239] p 297 A93-41412

OCAM - A CELSS modeling tool: Description and results --- Object-oriented Controlled Ecological Life Support System Analysis and Modeling [SAE PAPER 921241] p 298 A93-41413

Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water [SAE PAPER 921268] p 300 A93-41438

An assessment of waste processing/resource recovery technologies for lunar/Mars life applications [SAE PAPER 921271] p 300 A93-41441

Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems [SAE PAPER 921272] p 301 A93-41442

Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472

A novel membrane device for the removal of water vapor and water droplets from air [SAE PAPER 921322] p 304 A93-41484

Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models [SAE PAPER 921355] p 306 A93-41514

Biomass productivity and sustainability of a bioregenerative life-support system [SAE PAPER 921359] p 307 A93-41518

## CLOSING

- Design and preliminary testing of a membrane based water recycling system for European manned space missions  
[SAE PAPER 921396] p 309 A93-41553
- Hermes ECLSS - Main requirements and technical solutions  
[SAE PAPER 921400] p 309 A93-41555
- LIAC - A closed ecosystem research facility --- Life In A Can p 347 A93-42129
- Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302
- The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410
- CELSS nutrition system utilizing snails p 394 A93-52411
- Incineration for resource recovery in a closed ecological life support system p 409 A93-54826
- Techniques for optimal crop selection in a controlled ecological life support system  
[NASA-TM-103950] p 33 N93-12018
- ECLSS medical support activities  
[NASA-CR-184429] p 23 N93-12427
- The environmental control and life-support system for a lunar base: What drives its design p 66 N93-13991
- Life systems for a lunar base p 66 N93-13992
- Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997
- Distribution of human waste samples in relation to sizing waste processing in space p 68 N93-14001
- Annual report p 105 N93-16840
- [NASA-CR-191389] p 105 N93-16840
- Life support and self-sufficiency in space communities p 105 N93-16866
- Autonomous support for microorganism research in space p 83 N93-17780
- [NASA-CR-192062] p 83 N93-17780
- Automation of closed environments in space for human comfort and safety p 138 N93-17971
- [NASA-CR-192045] p 138 N93-17971
- Characterization of the water soluble component of inedible residue from candidate CELSS crops p 139 N93-18111
- [NASA-TM-107557] p 139 N93-18111
- Conceptual design of a thermal control system for an inflatable lunar habitat module p 140 N93-18113
- [NASA-CR-192014] p 140 N93-18113
- Space life support engineering program p 141 N93-19039
- [NASA-CR-192188] p 141 N93-19039
- Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 N93-19399
- Study on environment control and life support technology p 149 N93-20413
- Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628
- Zero-G life support for Space Station Freedom p 233 N93-22640
- Ecosystems on Earth and in space (the possible utilization of artificial ecosystems for space life support systems) p 236 N93-24406
- Alternative processes for water reclamation and solid waste processing in a physical/chemical bioregenerative life support system p 311 N93-27721
- Closed ecological systems: From test tubes to Earth's biosphere p 315 N93-27976
- Assessment of the state of the art in life support environmental control for SEI p 315 N93-27978
- Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979
- Earth to lunar CELSS evolution p 351 N93-29727
- Design of biomass management systems and components for closed loop life support systems p 351 N93-29728
- Automation of closed environments in space for human comfort and safety p 352 N93-29734
- Atmospheric control systems p 365 N93-31456
- ### CLOSING
- A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302
- ### CLOTHING
- Modeling clothed figures  
[AD-A257037] p 71 N93-15363
- ### CLOTTING
- Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition)  
[PB93-188670] p 338 N93-31158
- ### CMOS
- Electrically modifiable nonvolatile SONOS synapses for electronic neural networks  
[AD-A258318] p 122 N93-18252
- ### COATINGS
- Aquatic biofilms and their responses to disinfection and invading species  
[SAE PAPER 921211] p 296 A93-41387

## COCHLEA

- The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556

## COCKPIT SIMULATORS

- Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377
- Human visual performance model for crewstation design p 182 A93-26887
- Electronic map interpretation in a dual-task context p 176 A93-27144
- An exploratory study of plan-view terrain displays for air carrier operations p 289 A93-39573
- 3-D target designation using two control devices and an aiding technique --- in fighter cockpits p 408 A93-53120
- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713
- CVA, cockpit design and development tool p 147 N93-19780
- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information  
[AD-A263874] p 353 N93-29888
- Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display  
[AD-A264401] p 353 N93-30167
- The effects of cockpit heat on aviator sleep parameters p 371 N93-32266

## COCKPITS

- Design of a display system for a human pilot's supervisory tasks p 27 A93-11201
- Advanced displays for military operations  
[AIAA PAPER 92-4243] p 28 A93-13350
- High-speed civil transport - Advanced flight deck challenges  
[AIAA PAPER 92-4231] p 28 A93-13357
- Human factors on advanced flight decks; Proceedings of the Conference, London, United Kingdom, Mar. 14, 1991  
[ISBN 0-903409-85-2] p 29 A93-13408
- C.R.M. training for the advanced flight deck p 24 A93-13410
- Airline training for advanced technology cockpits p 24 A93-13411
- Vision modelling applications for display optimisation p 29 A93-13414
- Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416
- Army cockpit dealthalization program p 61 A93-15419
- Individual differences in computerized test performance for systems integration in cockpit management p 177 A93-27176
- Testing a subjective metric of situation awareness p 178 A93-27183
- The advent of helmet-mounted devices in the combat aircraft cockpit - An operator's viewpoint p 227 A93-30056
- The realities of using visually coupled systems for training applications p 228 A93-30063
- Information management problems and their influence on cockpit equipment architecture of transport aircraft p 223 A93-31491
- Flight deck automation and pilot workload  
[SAE PAPER 921132] p 291 A93-41320
- Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport  
[SAE PAPER 921133] p 291 A93-41321
- Task allocation and automation in design and operation of man-machine systems p 348 A93-42842
- An evaluation of miniaturized aircraft keyboards p 348 A93-42844
- Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895
- Flight mechanics of high-performance aircraft  
[ISBN 0-521-34123-X] p 365 A93-47019
- Human-centered automation and AI - Ideas, insights, and issues from the Intelligent Cockpit Aids research effort p 407 A93-52764
- Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase I  
[AD-A254138] p 25 N93-10662
- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713
- Direct manipulation and intermittent automation in advanced cockpits p 32 N93-11784
- [AD-A253814] p 32 N93-11784
- Human performance in complex task environments: A basis for the application of adaptive automation  
[AD-A255067] p 35 N93-12486

## SUBJECT INDEX

- Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts  
[AD-A254381] p 64 N93-12860
- The relationship between environmental conditions and UH-60 cockpit temperature  
[AD-A255918] p 69 N93-14090
- Development of measures of crew coordination  
[AD-A255384] p 70 N93-14651
- Using constraint satisfaction networks to study aircrew selection for advanced cockpits p 140 N93-18293
- [AD-A258151] p 140 N93-18293
- Advanced cockpit-mission and image management p 144 N93-19760
- Aircrew acceptance of automation in the cockpit p 144 N93-19761
- Developing virtual cockpits p 145 N93-19764
- Panoramic cockpit displays p 145 N93-19765
- Multimodal dialog system for future cockpits p 146 N93-19773
- Management of avionics data in the cockpit p 147 N93-19777
- The integration of advanced cockpit and systems design p 147 N93-19779
- The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 N93-19782
- Equipment, more or less ready to be used in helicopters p 148 N93-19785
- User areas in aircraft cockpit, using methods of rapid prototype development  
[MBB-FE-315-S-PUB-0493] p 196 N93-22389
- Oculo-motor responses and virtual image displays p 319 N93-28862
- Cognitive interface considerations for intelligent cockpits p 319 N93-28865
- Ergonomic development of digital map displays p 320 N93-28866
- Overview of cockpit technology research and development programs for improvement of the man/machine interface: Review of the AGARD AVP Symposium held in Madrid, May 1992 p 320 N93-28872
- ### CODING
- The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm  
[AD-A258156] p 132 N93-18294
- Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697
- The effects of display and response codes on information processing in an identification task  
[AD-A259531] p 234 N93-23451
- ### COENZYMES
- Biotechnical production and use of pyruvic acid with special reference to coenzyme regeneration  
[VTT-PUBS-77] p 209 N93-23369
- ### COGNITION
- Cortical localization of cognitive function by regression of performance on event-related potentials p 9 A93-10337
- A reappraisal of aging and pilot performance p 56 A93-15663
- Graphical displays - Implications for divided attention, focused attention, and problem solving p 102 A93-19984
- Choosing specifiers - An evaluation of the basic tasks model of graphical perception p 102 A93-19985
- Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870
- Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042
- COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569
- Individual differences in computerized test performance for systems integration in cockpit management p 177 A93-27176
- Cognitive predictors of vigilance p 287 A93-40771
- Cognitive performance and event-related brain potentials under simulated high altitudes p 331 A93-42189
- A cognitive classification of pilot performance in air combat p 347 A93-42814
- Perceptual bias for forward-facing motion p 339 A93-44940
- The effects of Benadryl and Hismanal on psychomotor performance and perceived performance p 385 A93-52303
- Disruption and maintenance of skilled visual search as a function of degree of consistency p 389 A93-52501
- Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503
- Cognitive function at high altitude p 386 A93-52505

- Space and cognition - The measurement of behavioral functions during a 6-day space mission  
p 405 A93-55164
- Eye movements and visual information processing  
[AD-A250198] p 24 N93-10278
- Cognition in the brain: Investigations using positron emission tomography  
[AD-A254280] p 14 N93-10765
- Ontology of mind, subjective ontology, and the example of temporal expressions  
[REPT-92-018] p 26 N93-11212
- Cognition and the brain  
[AD-A25483] p 59 N93-14788
- Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments  
p 99 N93-16801
- Cognitive factors in the air events of the Air Force during the last decade  
p 134 N93-19682
- The central executive component of working memory  
[AD-A258724] p 135 N93-20326
- The effects of display and response codes on information processing in an identification task  
[AD-A259531] p 234 N93-23451
- Facilitation and interference in identification of pictures and words  
[AD-A261484] p 260 N93-26356
- Duration of alpha suppression increases with angle in a mental rotation task  
[AD-A261592] p 260 N93-26435
- Comparative analytical study of evoked and event related potentials as correlates of cognitive processes  
[AD-A261388] p 261 N93-26446
- How expert pilots think: Cognitive processes in expert decision making  
[DOT/FAA/RD-93/9] p 288 N93-27103
- The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness  
[AD-A263033] p 283 N93-27923
- Expertise, text coherence, and constraint satisfaction: Effects on harmony and settling rate --- mental representations  
[AD-A262703] p 288 N93-28901
- Predicting aircrew training performance with psychometric g  
[AD-A264021] p 340 N93-30026
- Computing with neural maps: Application to perceptual and cognitive function  
[AD-A264056] p 341 N93-30033
- The AFOSR Workshop on the Future of EEG and MEG  
[AD-A264338] p 335 N93-30160
- Representations of shape in object recognition and long-term visual memory  
[AD-A264342] p 341 N93-30163
- Determinants of performance rating accuracy: A field study  
[AD-A264726] p 342 N93-30575
- COGNITIVE PSYCHOLOGY**
- Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus  
p 130 A93-25209
- The effect of type of task, degree of integration, and modality on the performance of concurrent tasks  
p 175 A93-27140
- Experimental validation of the attention switching component of the COGNET framework  
p 186 A93-27141
- Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation  
p 186 A93-27148
- Reclined seating in advanced crewstations - Human performance considerations  
p 186 A93-27151
- Using GOMS models and hypertext to create representations of medical procedures for online display  
p 188 A93-27170
- Effects of fatigue and heat stress on vigilance of workers in protective clothing  
p 177 A93-27173
- Doing two things at the same time  
p 180 A93-27817
- Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy  
p 211 A93-30278
- Cognitive competencies - Products of genes, experience, and technology --- for training of primates  
p 201 A93-32113
- Learning about primates' learning, language, and cognition  
p 201 A93-32124
- The role of spatial attention in visual word processing  
p 339 A93-44922
- High level organizing principles for display of systems fault information for commercial flight crews  
p 388 A93-52187
- Cognition in the brain: Investigations using positron emission tomography  
[AD-A254280] p 14 N93-10765
- Ontology of mind, subjective ontology, and the example of temporal expressions  
[REPT-92-018] p 26 N93-11212
- Relating cognitive function to military aviator performance in early HIV infection  
p 17 N93-11298
- A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity  
[AD-A255926] p 52 N93-14109
- Comparing performance on implicit memory tests  
[AD-A258168] p 131 N93-17921
- Cognitive engineering models in space systems  
[NASA-CR-192001] p 141 N93-18517
- The central executive component of working memory  
[AD-A258724] p 135 N93-20326
- A cognitive architecture for human performance process model research  
[AD-A261040] p 258 N93-25815
- Neural basis of motion perception  
[AD-A261452] p 260 N93-26349
- Facilitation and interference in identification of pictures and words  
[AD-A261484] p 260 N93-26356
- Spontaneous discovery and use of categorical structure  
[AD-A261658] p 260 N93-26364
- Neuromagnetic investigation of cortical regions underlying short-term memory  
[AD-A261445] p 261 N93-26521
- How expert pilots think: Cognitive processes in expert decision making  
[DOT/FAA/RD-93/9] p 288 N93-27103
- Expertise, text coherence, and constraint satisfaction: Effects on harmony and settling rate --- mental representations  
[AD-A262703] p 288 N93-28901
- Representations of shape in object recognition and long-term visual memory  
[AD-A264342] p 341 N93-30163
- Background and objectives of the PARAT program  
p 343 N93-31230
- Phases of the project development and examination methodologies  
p 343 N93-31231
- The position test: A computer generated process for acquisition of inductive logic thinking  
p 343 N93-31232
- A decision-theoretic approach to the display of information for time-critical decisions: The Vista project  
p 367 N93-32152
- COLD ACCLIMATIZATION**
- Regulation of the carbohydrate metabolism in humans residing in the North  
p 384 A93-51117
- Intermittent cold exposure causes a muscle-specific shift in the fiber type composition in rats  
p 378 A93-52618
- COLD TOLERANCE**
- Investigation of the character of changes in the 'central' temperature of the body in cold environment, using a rabbit-body thermoregulation model  
p 112 A93-25651
- Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism  
p 360 A93-46968
- Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau  
p 382 A93-49560
- Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations  
[AD-A259625] p 218 N93-24021
- Cellular and tissue injury during nonfreezing cold injury and frostbite  
[AD-A260574] p 254 N93-25900
- Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates  
[AD-A262762] p 285 N93-28939
- Medical aspects of cold weather operations: A handbook for medical officers  
[AD-A263559] p 336 N93-30588
- An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination  
[AD-A264293] p 331 N93-30818
- COLD WATER**
- Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia  
[AD-A255120] p 34 N93-12291
- COLD WEATHER**
- Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation  
[AD-A254328] p 23 N93-12145
- Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations  
[AD-A259625] p 218 N93-24021
- Medical aspects of cold weather operations: A handbook for medical officers  
[AD-A263559] p 336 N93-30588
- COLD WEATHER TESTS**
- Biophysical model for handwear insulation testing  
[AD-A262926] p 320 N93-28884
- COLLAGENS**
- Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy  
p 155 A93-28725
- Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands  
p 156 A93-28746
- COLLECTION**
- Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program  
[DOT/FAA/AM-92/15] p 218 N93-24088
- COLLIMATION**
- Depth-viewing-volume increase by collimation of stereo 3-D displays  
p 407 A93-52915
- COLLISION AVOIDANCE**
- Collision avoidance of a multiple degree of redundancy manipulator operating through a window  
p 136 A93-23846
- COLLISION PARAMETERS**
- Modeling clothed figures  
[AD-A257037] p 71 N93-15363
- COLLOIDING**
- Recovering potable water from wastewater in space platforms by lyophilization  
[SAE PAPER 921323] p 304 A93-41485
- Extraction of potable water from urine for space applications  
p 345 A93-42121
- Freeze-dried human red blood cells  
[AD-A253295] p 14 N93-11193
- COLOR**
- Chromaticity and luminance as coding dimensions in visual search  
p 103 A93-19989
- Visibility of transmissive liquid crystal displays under dynamic lighting conditions  
p 103 A93-19990
- Colour is what the eye sees best  
p 159 A93-26245
- Perception of lightness and brightness in complex patterns  
[AD-A254093] p 25 N93-10658
- The effects of luminance boundaries on color perception  
[AD-A250705] p 22 N93-11841
- COLOR CODING**
- Chromaticity and luminance as coding dimensions in visual search  
p 103 A93-19989
- Up/down in (im)possible flight attitude indicators - Some effects of colour, shape and pattern  
p 185 A93-27128
- Colour head-up displays - Help or hindrance?  
p 187 A93-27154
- COLOR VISION**
- The development of a visual color checkerboard stimulator  
p 30 A93-13723
- Chromaticity and luminance as coding dimensions in visual search  
p 103 A93-19989
- Effects of display luminance on the recognition of color symbols on similar color backgrounds  
p 189 A93-27191
- Color helmet display for the tactical environment - The pilot's chromatic perspective  
p 227 A93-30058
- Low-cost color LCD helmet display  
p 228 A93-30062
- Microwaves and the visual analyzer  
p 250 A93-35247
- The effects of luminance boundaries on color perception  
[AD-A250705] p 22 N93-11841
- Higher order mechanisms of color vision  
[AD-A256369] p 60 N93-15329
- Validity of clinical color vision tests for air traffic control specialists  
[AD-A258219] p 123 N93-18301
- COLORIMETRY**
- Methods development for total organic carbon accountability  
[NASA-CR-184438] p 40 N93-12949
- COLUMBUS SPACE STATION**
- Zero-gravity underwater simulations for the Columbus programme - Outcome of the first campaigns  
p 62 A93-17075
- The strategic role of automation and robotics for Columbus utilization  
p 181 A93-26567
- EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory  
p 231 A93-31522
- Effects of air bubble contamination in recirculating water loop  
[SAE PAPER 921282] p 302 A93-41450
- Recent regenerative ECLSS technology developments in Europe  
[SAE PAPER 921332] p 304 A93-41493

- Selection of astronauts for European space missions p 225 N93-24345
- The USO-concept applied to a biological model experiment p 210 N93-24379
- Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382
- Columbus payload requirements in human physiology p 220 N93-24386
- CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 N93-24401
- COMBAT**
- The effect of wearing protective chemical warfare combat clothing on human performance p 230 A93-30287
- A cognitive classification of pilot performance in air combat p 347 A93-42814
- The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 N93-12491
- Walter Reed Army Institute of Research biannual report [AD-A255630] p 52 N93-14162
- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm [AD-A258146] p 122 N93-18292
- The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm [AD-A258156] p 132 N93-18294
- Helicopter night vision goggle testing in the United Kingdom p 148 N93-19917
- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm [AD-A259243] p 171 N93-20580
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 N93-28850
- Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 N93-29406
- COMBUSTION**
- Protective helmet assembly [NASA-CASE-MSC-21842-1] p 106 N93-17088
- COMBUSTION PRODUCTS**
- Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations [DOT/FAA/AM-93/8] p 283 N93-27158
- COMET NUCLEI**
- Comets as a possible source of prebiotic molecules p 109 A93-17979
- Computational study of radiation chemical processing in comet nuclei p 109 A93-17982
- Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561
- COMETS**
- Comets and the origins and evolution of life: Proceedings of the Conference, Univ. of Wisconsin, Eau Claire, Sept. 30-Oct. 2, 1991 p 109 A93-17976
- Comets and the formation of biochemical compounds on the primitive earth - A review p 109 A93-17977
- Comet impacts and chemical evolution on the bombarded earth p 109 A93-17980
- Cometary supply of terrestrial organics - Lessons from the K/T and the present epoch p 109 A93-17981
- Terrestrial and extraterrestrial sources of molecular homochirality p 110 A93-17986
- COMFORT**
- Discomfort glare from high-intensity discharge headlamps: Effects of context and experience [PB93-174720] p 336 N93-30659
- COMMAND AND CONTROL**
- Controllability of the voice command system - A preliminary study p 27 A93-11287
- Intelligent sensing and control for advanced teleoperation p 409 A93-54158
- From pilot's associate to satellite controller's associate p 32 N93-11922
- Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interfaces [AD-A254493] p 63 N93-12576
- Automatic information processing and high performance skills [AD-A258473] p 132 N93-18273
- Modeling the dynamics of mental workload and human performance in complex systems [AD-A258553] p 135 N93-19956
- COMMERCIAL AIRCRAFT**
- Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775
- Flight crew sleep during multiple layover polar flights p 380 A93-49226
- Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306
- Control of infection in an international airline p 407 A93-52867
- Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 N93-11279
- Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary p 99 N93-16189
- COMMONALITY**
- Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071
- COMMUNICATING**
- Questioning mechanisms during complex learning [AD-A247382] p 26 N93-11415
- COMMUNICATION EQUIPMENT**
- Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) [AD-A253393] p 30 N93-10217
- Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757
- COMMUNICATION THEORY**
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- COMPATIBILITY**
- Helicopter night vision goggle testing in the United Kingdom p 148 N93-19917
- Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081
- COMPLEMENT (BIOLOGY)**
- Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190
- COMPLEX COMPOUNDS**
- Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793
- COMPLEX SYSTEMS**
- A monitoring and control system for complex man-machine systems: Preliminary design p 70 N93-14951
- Acquisition and production of skilled behavior in dynamic decision-making tasks [NASA-CR-192361] p 181 N93-20908
- A decision-theoretic approach to the display of information for time-critical decisions: The Vista project p 367 N93-32152
- COMPONENT RELIABILITY**
- Submarine Advanced Integrated Life Support system (SAILS) program [AD-A253564] p 32 N93-11812
- COMPOSITE STRUCTURES**
- The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569
- Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085
- COMPOUND A**
- Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate [NASA-CR-193278] p 330 N93-30665
- COMPRESSED GAS**
- Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 N93-11279
- COMPRESSION LOADS**
- Power assist EVA glove development [SAE PAPER 921255] p 299 A93-41425
- COMPUTATION**
- Mathematics and biology: The interface, challenges and opportunities [DE92-041207] p 82 N93-17359
- COMPUTATIONAL CHEMISTRY**
- Computational study of radiation chemical processing in comet nuclei p 109 A93-17982
- COMPUTER AIDED DESIGN**
- Visual modelling applications for display optimisation p 29 A93-13414
- Human visual performance model for workstation design p 182 A93-26887
- Visualization and modeling of factors influencing visibility in computer-aided workstation design [SAE PAPER 921135] p 292 A93-41323
- Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey [SAE PAPER 921350] p 306 A93-41509
- Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921354] p 306 A93-41513
- An operational evaluation process for long-duration mission habitats in space p 345 A93-42114
- Computer-supported collaborative work - A new agenda for human factors engineering p 348 A93-42841
- Distributed environmental control p 32 N93-11924
- Design of a portable powered seat lift p 195 N93-22190
- COMPUTER AIDED MAPPING**
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- COMPUTER AIDED TOMOGRAPHY**
- New techniques for positron emission tomography in the study of human neurological disorders [DE92-015353] p 23 N93-11873
- New techniques for positron emission tomography in the study of human neurological disorders [DE93-002098] p 95 N93-15900
- Non-invasive evaluation of the cardiac autonomic nervous system by PET [DE92-041077] p 96 N93-16441
- COMPUTER ANIMATION**
- Human-like agents with posture planning ability p 192 A93-29118
- COMPUTER ASSISTED INSTRUCTION**
- Dimensions of complexity in learning from interactive instruction --- for robotic systems deployed in space p 191 A93-29111
- Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694
- Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 N93-11784
- Human factors research in aircrew performance and training: 1986-1991 p 63 N93-12609
- Human Factors in Aviation Maintenance, phase 2 [DOT/FAA/AM-93/5] p 267 N93-26089
- COMPUTER DESIGN**
- Formal aspects of human-computer interaction p 66 N93-13909
- COMPUTER GRAPHICS**
- Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays p 102 A93-19987
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation --- Task Load Index p 175 A93-27139
- Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice p 186 A93-27145
- Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782
- A teleoperation training simulator with visual and kinesthetic force virtual reality p 233 A93-33448
- Visual search in virtual environments p 233 A93-33450
- System for generating dynamic video imagery for human factors research [AD-A248675] p 31 N93-11743
- Advanced technology for portable personal visualization [AD-A253808] p 32 N93-11783
- Modeling clothed figures [AD-A257037] p 71 N93-15363
- The effects of iconic presentation on individuals [AD-A258785] p 133 N93-18949
- Measures of user-system interface effectiveness: An encoding scheme and indicators for assessing the usability of graphical, direct-manipulation style user interfaces [AD-A260606] p 265 N93-25840
- Ergonomic development of digital map displays p 320 N93-28866
- COMPUTER NETWORKS**
- Operator/system communication - An optimizing decision tool p 101 A93-19104
- Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis p 33 N93-11941
- COMPUTER PROGRAMMING**
- Teleprogramming a cooperative space robotic workcell for Space Station p 190 A93-29109
- Proceedings of Workshop 1: The Human Brainmap Database [AD-A260720] p 258 N93-25654
- COMPUTER PROGRAMS**
- A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935

- CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180
- Stereoscopic displays and applications III; Proceedings of the Meeting, San Jose, CA, Feb. 12, 13, 1992 [SPIE-1669] p 408 A93-53119
- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions [AD-A252820] p 26 A93-11779
- The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork [AD-A256192] p 69 A93-14520
- High-resolution contrast control on a video display: Method and calibration [AD-A256552] p 60 A93-15400
- An automated processing system for food frequency and nutrition knowledge questionnaire p 367 A93-32241
- COMPUTER STORAGE DEVICES**
- DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field [ETN-93-93799] p 284 A93-28469
- COMPUTER SYSTEMS DESIGN**
- A physician's workstation designed for NASA and earth-based applications p 189 A93-28695
- Advanced cockpit-mission and image management p 144 A93-19760
- COMPUTER SYSTEMS PROGRAMS**
- Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis p 33 A93-11941
- Operator Performance Support System (OPSS) p 196 A93-22195
- COMPUTER TECHNIQUES**
- Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro p 205 A93-33045
- Visual perception of structure from motion [AD-A253235] p 26 A93-11503
- Operator vision aids for space teleoperation assembly and servicing p 33 A93-11981
- The relationship between computer scoring and safety-pilot grading of flight performance [AD-A256245] p 58 A93-14600
- A computer-based visual analog scale [AD-A258152] p 122 A93-18280
- Medical evaluation of spatial disorientation mishaps p 134 A93-19703
- Digital mammography, cancer screening: Factors important for image compression p 221 A93-24551
- Automatic detection of seizures with applications p 254 A93-25592
- Proceedings of Workshop 1: The Human Brainmap Database [AD-A260720] p 258 A93-25654
- The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 A93-26082
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 A93-31236
- COMPUTER VISION**
- Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles p 135 A93-22916
- Accuracy of locating circular features using machine vision --- for robotic systems p 182 A93-27022
- Vision navigator for free-flying robots p 183 A93-27025
- Incorporating robot vision in tele-autonomous systems p 184 A93-27031
- An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137
- An operator interface design for a telerobotic inspection system [AIAA PAPER 93-1160] p 231 A93-31034
- A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267
- Temporal Frequency Spectrum for describing and modeling motion perception p 232 A93-33250
- Visual specification of robot motion p 348 A93-42845
- Virtual landings --- developing Enhanced Vision Systems for VFR p 410 A93-54868
- A new test of scanning and monitoring ability: Methods and initial results p 24 A93-10321
- Neural network retinal model real time implementation [AD-A255652] p 52 A93-14210
- Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision [AD-A256059] p 58 A93-14580
- The perception of articulated motion: Recognizing moving light displays [AD-A256046] p 59 A93-14660
- The cognitive, perceptual, and neural bases of skilled performance [AD-A258236] p 130 A93-17820
- Modeling of a full vision system using combined Visual/Haptic search for remote object identification [AD-A260977] p 266 A93-25867
- Receptoral and neural aliasing [AD-A261438] p 261 A93-26489
- A modular head/eye platform for real-time reactive vision [OUEL-1941/92] p 320 A93-28897
- A tutorial on exit pupils and eye rotation with virtual image optical displays [AD-A262399] p 333 A93-29400
- Modelling and simulation of human retinal vision processing p 335 A93-30269
- A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever [NASA-CR-193301] p 365 A93-31844
- COMPUTERIZED SIMULATION**
- A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935
- Heat stress in protective clothing - Validation of a computer model and the Heat-Humidity Index (HHI) p 88 A93-18040
- Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- An improved simulation based biomechanical model to estimate static muscle loadings p 160 A93-27172
- CREWCUT - A new tool for predicting human performance in conceptual systems p 178 A93-27179
- CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180
- Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188
- Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921122] p 291 A93-41314
- The effect of geometric field of view and tunnel design for perspective flight-path displays [SAE PAPER 921131] p 291 A93-41319
- Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921354] p 306 A93-41513
- A computer simulation model for attention distribution and event generation p 340 A93-45323
- Physical and digital simulations for IVA robotics p 391 A93-49445
- Line-of-sight determination in real-time simulations [AIAA PAPER 93-3567] p 406 A93-52666
- 3-D target designation using two control devices and an aiding technique --- in fighter cockpits p 408 A93-53120
- Operator workload predictions for the revised AH-64A workload prediction model, volume 1 [AD-A254198] p 30 A93-10261
- Computer simulations of object discrimination by visual cortex [AD-A253345] p 12 A93-10271
- Self-programming of matter and the evolution of proto-biological organizations [DE92-015244] p 5 A93-10628
- System for generating dynamic video imagery for human factors research [AD-A248675] p 31 A93-11743
- New techniques for positron emission tomography in the study of human neurological disorders [DE92-015353] p 23 A93-11873
- Distributed environmental control p 32 A93-11924
- Super auditory localization for improved human-machine interfaces [AD-A254699] p 34 A93-12229
- Simulation of excitatory/inhibitory interactions in single auditory neurons [AD-A253614] p 50 A93-13252
- Hybrid 2 and hybrid 3 dummy neck properties for computer modeling [AD-A255544] p 66 A93-13874
- Directory of design support methods [AD-A256987] p 104 A93-16258
- A review of models of the human temperature regulation system [AD-A258023] p 120 A93-17918
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 A93-17971
- Space life support engineering program [NASA-CR-192188] p 141 A93-19039
- Occupant kinematics simulation of the Kegworth air accident p 142 A93-19662
- Computer aided methods for simulating occupant response to impact using OASYS DYNA3D p 142 A93-19666
- Improving manikin biofidelity p 142 A93-19668
- Flight above a virtual world p 145 A93-19766
- Mission and Safety Critical (MASC): An EVACS simulation with nested transactions [NASA-CR-192295] p 149 A93-20314
- Microcomputer based software for biodynamic simulation p 196 A93-22191
- A linear, time-varying simulation of the respiratory tract system [DE93-004515] p 218 A93-24009
- Computerized atmospheric trace contaminant control simulation for manned spacecraft [NASA-TM-108409] p 321 A93-28977
- Modelling and simulation of human retinal vision processing p 335 A93-30269
- CONCENTRATION (COMPOSITION)**
- Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048
- Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030
- Comment on 'Summary and implications of reported amino acid concentrations in the Murchison meteorite' by E. L. Shock and M. D. Schulte p 412 A93-53294
- CONCENTRATORS**
- Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 A93-11279
- CONCRETE STRUCTURES**
- Concrete lunar base investigation p 107 A93-17445
- CONDENSATES**
- Methods development for total organic carbon accountability [NASA-CR-184438] p 40 A93-12949
- CONDENSED MATTER PHYSICS**
- Spontaneous regulating mechanisms that may have led to the origin of life [DE93-603677] p 331 A93-31161
- CONDITIONED REFLEXES**
- The role of dermorphin in the regulation of the winter hibernation processes in mammals p 38 A93-16748
- Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural p 203 A93-32773
- Investigating motion sickness using the conditioned taste aversion paradigm p 400 A93-55937
- CONDITIONING (LEARNING)**
- Investigating motion sickness using the conditioned taste aversion paradigm p 400 A93-55937
- CONFERENCES**
- Human factors on advanced flight decks; Proceedings of the Conference, London, United Kingdom, Mar. 14, 1991 [ISBN 0-903409-85-2] p 29 A93-13408
- A lunar-based chemical analysis laboratory [ISBN 0-937194-25-5] p 39 A93-17426
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- Large-screen-projection, avionic, and helmet-mounted displays; Proceedings of the Meeting, San Jose, CA, Feb. 26-28, 1991 [SPIE-1456] p 181 A93-26881
- Cooperative intelligent robotics in space II; Proceedings of the Meeting, Boston, MA, Nov. 12-14, 1991 [SPIE-1612] p 182 A93-27001
- Human Factors Society, Annual Meeting, 35th, San Francisco, CA, Sept. 2-6, 1991, Proceedings. Vols. 1 & 2 p 185 A93-27126
- Cooperative intelligent robotics in space III; Proceedings of the Meeting, Boston, MA, Nov. 16-18, 1992 [SPIE-1829] p 190 A93-29101
- Helmet-mounted displays III; Proceedings of the Meeting, Orlando, FL, Apr. 21, 22, 1992 [SPIE-1695] p 227 A93-30051



- Water in the solar system and its role in exobiology; Proceedings of the European Geophysical Society General Assembly, 26th, Wiesbaden, Germany, Apr. 22-26, 1991 p 268 A93-36551
- Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report p 375 A93-49206
- Visual data interpretation; Proceedings of the Meeting, San Jose, CA, Feb. 10-11, 1992 p 391 A93-49451
- Stereoscopic displays and applications III; Proceedings of the Meeting, San Jose, CA, Feb. 12, 13, 1992 p 408 A93-53119
- Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 A93-11283
- Diversity in biological research [NSF-92-19] p 42 A93-13700
- Overview: Exobiology in solar system exploration p 112 A93-18546
- Advanced Aircraft Interfaces: The Machine Side of the Man-Machine Interface [AGARD-CP-521] p 144 A93-19757
- Human Factors Issues in Aircraft Maintenance and Inspection. Science, technology, and management: A program review [PB93-146975] p 234 A93-23647
- Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 A93-28835
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 A93-28850
- Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals [DE93-006235] p 276 A93-28890
- CONFINEMENT**
- Long-duration isolation and confinement: Human factors issues and research requirements p 100 A93-16808
- CONJUGATION**
- Immunoconjugates: Magic bullets for cancer therapy? p 253 A93-25567
- CONNECTIVE TISSUE**
- Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 A93-28759
- CONSERVATION**
- Variable-Volume Flushing (V-VF) device for water conservation in toilets p 195 A93-22167
- CONSISTENCY**
- Disruption and maintenance of skilled visual search as a function of degree of consistency p 389 A93-52501
- CONSOLES**
- An evaluation of miniaturized aircraft keyboards p 348 A93-42844
- CONSTRAINTS**
- Constraints on learning in dynamic synapses [PREPRINT-890] p 100 A93-17026
- CONSTRUCTORS**
- Contractile properties of the calf triceps muscle in humans exposed to simulated weightlessness p 45 A93-15168
- CONSTRUCTION**
- Vertical regolith shield wall construction for lunar base applications p 107 A93-17446
- CONSUMABLES (SPACECREW SUPPLIES)**
- Consumables and wastes estimations for the First Lunar Outpost [SAE PAPER 921287] p 302 A93-41453
- Life support systems [AAS PAPER 91-320] p 409 A93-54308
- CONTACT DERMATITIS**
- Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776
- CONTACT LENSES**
- Contact lenses in aviation - The Marine Corps experience p 289 A93-41172
- Prevalence of corrective lens wear in Royal Australian Air Force flight crews p 289 A93-41173
- Operational use of contact lenses by military aircrew [AGARD-AG-334] p 95 A93-15824
- The use of extended wear contact lenses in the aviation environment: An Army-wide study [AD-A260938] p 255 A93-26218
- CONTAMINANTS**
- Space habitat contaminant growth models. II p 345 A93-42094
- Development of novel models for describing multiple toxicity effects [AD-A264439] p 336 A93-30422
- CONTAMINATION**
- Aquatic biofilms and their responses to disinfection and invading species [SAE PAPER 921211] p 296 A93-41387

- Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water [SAE PAPER 921268] p 300 A93-41438
- Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472
- Mitigation of dust contamination during EVA operations on the moon and Mars p 345 A93-42107
- Medical care on the moon p 331 A93-42126
- Space habitat environmental health - A systems issue p 347 A93-42151
- Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems [NASA-CR-192571] p 359 A93-32365
- CONTOURS**
- Perceptual dimensions of visual scenes relevant for simulating low-altitude flight [AD-A254645] p 57 A93-12662
- Methods for characterizing the human head for the design of helmets [AD-A263875] p 353 A93-29889
- CONTRAST**
- Human speed perception is contrast dependent p 174 A93-26950
- Analysis of factors influencing contrast vision in normal eyes p 332 A93-44848
- Spatial contrast sensitivity through aviator's night vision imaging system p 393 A93-52300
- High-resolution contrast control on a video display: Method and calibration [AD-A256552] p 60 A93-15400
- CONTROL BOARDS**
- Gloved operator performance study [AD-A256894] p 104 A93-16048
- CONTROL EQUIPMENT**
- An evaluation of miniaturized aircraft keyboards p 348 A93-42844
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 A93-17971
- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 A93-28293
- CONTROL SIMULATION**
- Training for avionics evaluation [AIAA PAPER 92-4068] p 24 A93-11254
- Study of the relationship between therapeutic effects and control parameters of ECP using a simulation method p 11 A93-13716
- A distributed telerobotics system for space operations p 192 A93-29132
- What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment [AIAA PAPER 93-3561] p 406 A93-52661
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 A93-17971
- Virtual interface applications for airborne weapons systems p 318 A93-28858
- Computerized atmospheric trace contaminant control simulation for manned spacecraft [NASA-TM-108409] p 321 A93-28977
- CONTROL SYSTEMS DESIGN**
- Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222
- Initial experiments on the end-point control of a 2-DOF long-reach elastic manipulator p 183 A93-27024
- Knowledge-based task planning for the Special Purpose Dextrous Manipulator p 191 A93-29110
- Compatibility and consistency in display-control systems - Implications for aircraft decision aid design p 230 A93-30454
- Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517
- HERA - A reliable and safe space robot p 263 A93-35571
- Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom [SAE PAPER 921216] p 296 A93-41392
- Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598
- Distribution of functions in a man-machine control system of a certain type p 364 A93-45687
- Designs and development of a master-slave teleoperated robot p 390 A93-49357
- A manipulator control testbed - Implementation and applications [AAS PAPER 92-054] p 392 A93-50594
- Optimizing dynamic transparency in teleoperator architectures [AAS PAPER 92-056] p 392 A93-50596
- A space manipulator with inertially fixed base? [AIAA PAPER 93-3866] p 393 A93-51452

- What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment [AIAA PAPER 93-3561] p 406 A93-52661
- Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator p 407 A93-53038
- Human factors applications in control systems design for ground testing of turbine engines p 409 A93-54410
- Distributed environmental control p 32 A93-11924
- Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier p 65 A93-13486
- A monitoring and control system for complex man-machine systems: Preliminary design p 70 A93-14951
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 A93-17971
- Preliminary design of a radiator shading device for a lunar outpost [NASA-CR-192016] p 139 A93-18019
- Design requirements for force reflecting master controllers p 139 A93-18035
- Mission and Safety Critical (MASC): An EVACS simulation with nested transactions [NASA-CR-192295] p 149 A93-20314
- Zero-G life support for Space Station Freedom p 233 A93-22640
- Human factors engineering: A key element of instrumentation and control system design [DE93-006731] p 264 A93-25415
- Power assist EVA glove development p 314 A93-27850
- Lunar base thermal management/power system analysis and design p 315 A93-27985
- Automation of closed environments in space for human comfort and safety p 352 A93-29734
- CONTROL THEORY**
- Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot [AIAA PAPER 93-3863] p 392 A93-51449
- Mission and Safety Critical (MASC): An EVACS simulation with nested transactions [NASA-CR-192295] p 149 A93-20314
- Daily exercise routines p 360 A93-31455
- Atmospheric control systems p 365 A93-31456
- Rotational speed control p 365 A93-31457
- CONTROL VALVES**
- Regenerable biocide delivery unit, volume 1 [NASA-CR-185701-VOL-1] p 274 A93-27122
- CONTROLLABILITY**
- Controllability of the voice command system - A preliminary study p 27 A93-11287
- CONTROLLED ATMOSPHERES**
- Controlled Ecological Life Support System - CELSS p 62 A93-17432
- Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF) [SAE PAPER 921186] p 294 A93-41365
- Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements [SAE PAPER 921347] p 305 A93-41506
- The Minitor system for growth of small plants under controlled environment conditions p 358 A93-46471
- Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment [AD-A258502] p 129 A93-20400
- Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 A93-23995
- Membrane technology: A search for membranes for submarine atmosphere control [AD-A260581] p 266 A93-25904
- CONTROLLERS**
- Ground-based control of Space Station Freedom-based robots p 263 A93-35570
- Human-in-the-loop evaluation of RMS Active Damping Augmentation [AIAA PAPER 93-3875] p 393 A93-51460
- Ocular attention-sensing interface system [NASA-CR-190884] p 65 A93-13450
- Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier p 65 A93-13486
- Control system and method for prosthetic devices [NASA-CASE-MSC-21941-1] p 106 A93-17087
- Design requirements for force reflecting master controllers p 139 A93-18035



## SUBJECT INDEX

A modular head/eye platform for real-time reactive vision  
[OUEL-1941/92] p 320 N93-28897

Integration of advanced teleoperation technologies for control of space robots p 366 N93-32107

**CONVECTION**  
A second postcooling afterdrop - More evidence for a convective mechanism p 44 A93-14969

**CONVECTIVE HEAT TRANSFER**  
Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161

**COOL STARS**  
Laboratory simulation of organic grain mantles p 268 A93-36554

**COOLING**  
Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330  
Decrement in manual arm performance during whole body cooling p 88 A93-18038  
The efficiency of thermoregulatory responses in the cooling of the organism p 325 A93-43136  
Effect of protective clothing ensembles on artillery battery crew performance p 64 N93-12960  
Evaluation of two microclimate cooling air vests on a heated mannequin p 194 N93-21269  
A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment p 264 N93-25318

**COOLING SYSTEMS**  
The optimum design of personal liquid cooling system p 60 A93-14314  
Space Shuttle crew compartment debris-contamination [SAE PAPER 921345] p 305 A93-41504  
Physiological stress from chemical defense clothing and equipment p 51 N93-14028  
Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment p 129 N93-20400  
Lightweight passive microclimate cooling device p 317 N93-28112  
Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits p 350 N93-29471

**COORDINATES**  
Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 N93-25736

**COORDINATION**  
Predictable eye-head coordination during driving p 57 A93-16373  
An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission p 35 N93-12509  
Development of measures of crew coordination p 70 N93-14651  
Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362

**CORIOLIS EFFECT**  
An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle p 170 A93-28758  
Process for selectively recovering algae and protozoa [NASA-CASE-MFS-26124-1-NPO] p 276 N93-29174

**CORONARY ARTERY DISEASE**  
Value of frequency domain correlative cardiography (FCG) to early diagnosis of coronary heart disease p 10 A93-13705  
Wall shear stress estimates in coronary artery constrictions p 170 A93-28759  
Hypertension and the probability of an incapacitating event over a defined period - Impact of treatment p 215 A93-32777  
Carbon monoxide exposure of subjects with documented cardiac arrhythmias p 337 N93-30890  
Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 N93-32253  
Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces p 363 N93-32254

**CORONARY CIRCULATION**  
Study of the relationship between therapeutic effects and control parameters of ECP using a simulation method p 11 A93-13716

**CORRELATION**  
Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318

Cognition and the brain p 59 N93-14788  
[AD-A255483] p 59 N93-14788  
Conversion of temporal correlations between stimuli to spatial correlations between attractors p 96 N93-16962  
[PREPRINT-856] p 96 N93-16962

**CORTICOSTEROIDS**  
Effects of antihistostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693  
Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728

**CORTISONE**  
The effect of G-experience on heart rate during +Gz loading p 333 A93-45322  
Regulation of the carbohydrate metabolism in humans residing in the North p 384 A93-51117

**COSMIC DUST**  
Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824

**COSMIC RAYS**  
On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858  
Radiation conditions onboard passenger aircraft p 249 A93-35230  
Depth-dose equivalent relationship for cosmic rays at various solar minima p 391 A93-49564  
Katz model prediction of Caenorhabditis elegans mutagenesis on STS-42 [NASA-TM-4383] p 50 N93-13023

**COSMOCHEMISTRY**  
Kinetics of peptide hydrolysis and amino acid decomposition at high temperature --- space biochemical evolution p 411 A93-53289

**COSMONAUTS**  
Reaction characteristics of several neuroregulating systems of cosmonauts after a 366-day-long space flight p 45 A93-15167  
Altitude stress and cosmonaut training p 262 A93-35235  
Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238  
Protein composition of the blood plasma of cosmonauts after lengthy orbital flights p 249 A93-35243  
Utilization of the graded universal testing system to increase the efficiency for assessing aerobic and anaerobic capacity p 246 N93-26077

**COSMOS SATELLITES**  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419  
Turning-over reaction during free fall in labyrinthized rats after a flight on the Cosmos 936 biosatellite p 241 A93-35246

**COST ANALYSIS**  
Susceptibility in USAF recruits to vaccine preventable diseases p 18 N93-11301  
Introduction to training decisions modeling technologies: The training decisions system p 27 N93-12252  
[AD-A249862] p 27 N93-12252  
Space Biology Initiative. Trade Studies, volume 1 [NASA-CR-190989] p 207 N93-23068  
Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070  
Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071  
Space Biology Initiative. Trade Studies, volume 2 [NASA-CR-190990] p 208 N93-23079  
Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080  
Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 N93-23082  
Performance measurement systems: A best practices study [AD-A262180] p 350 N93-29444

**COST EFFECTIVENESS**  
Introduction to training decisions modeling technologies: The training decisions system p 27 N93-12252  
[AD-A249862] p 27 N93-12252  
Automation and robotics human performance [NASA-CR-193049] p 267 N93-26153

**COST ESTIMATES**  
Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069

## CREW PROCEDURES (INFLIGHT)

Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070

**COSTS**  
Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts p 64 N93-12860  
Mathematics and biology: The interface, challenges and opportunities p 82 N93-17359  
The US Navy Healthy Back Program: Effect on back knowledge among recruits p 121 N93-18210  
[AD-A254381] p 64 N93-12860  
[DE92-041207] p 82 N93-17359

**COUNTERMEASURES**  
Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327  
Biomedical Monitoring and Countermeasures Facility p 205 N93-22624  
The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068  
Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 N93-29651

**COUPLING**  
Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing [DE93-006411] p 210 N93-24028

**CRACKING (CHEMICAL ENGINEERING)**  
Recent regenerative ECLSS technology developments in Europe p 304 A93-41493  
[SAE PAPER 921332] p 304 A93-41493

**CRASH INJURIES**  
The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989 p 118 A93-25201  
The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202  
Analysis of injuries following the crash of Avianca Flight 52 p 382 A93-49562

**CRASH LANDING**  
The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident p 49 N93-12612  
[AD-A254550] p 49 N93-12612  
Occupant kinematics simulation of the Kegworth air accident p 142 N93-19662  
Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664  
Occupant simulation as an aspect of flight safety research p 142 N93-19665

**CRASHES**  
Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663  
The design and use of automotive crash test dummies p 142 N93-19669  
Toxicological investigations of flight accidents: Findings and methods p 126 N93-19695  
Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697

**CRASHWORTHINESS**  
Army cockpit delethalization program p 61 A93-15419  
The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989 p 118 A93-25201  
The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202  
Computer aided methods for simulating occupant response to impact using OASYS DYNA3D p 142 N93-19666  
Design/development of an enhanced biodynamic manikin p 142 N93-19667  
An improved anthropometric test device p 143 N93-19670

**CREATIVITY**  
How expert pilots think: Cognitive processes in expert decision making [DOT/FAA/RD-93/9] p 288 N93-27103

**CRETACEOUS-TERTIARY BOUNDARY**  
Detection of genetic effects of excess near-ultraviolet irradiation under exobiology conditions p 39 A93-17446  
Comet impacts and chemical evolution on the bombarded earth p 109 A93-17980  
Cometary supply of terrestrial organics - Lessons from the K/T and the present epoch p 109 A93-17981  
Geography of end-Cretaceous marine bivalve extinctions p 273 A93-41075

**CREW PROCEDURES (INFLIGHT)**  
Military aircrew head support system p 231 A93-31944

## CREW PROCEDURES (PREFLIGHT)

- Performance consequences of automation-induced complacency' p 286 A93-39571  
An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 N93-12509  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070

## CREW PROCEDURES (PREFLIGHT)

- Assessing for preflight predictors of airsickness p 8 A93-10335  
The development and use of a generic nonnormal checklist with applications in ab initio and Introductory Advanced Qualification Programs p 180 A93-27456  
Cockpit checklists - Concepts, design, and use p 389 A93-52506  
Mir 1992 operations and crew training p 226 N93-24352

## CREW WORKSTATIONS

- Advanced displays for military operations [AIAA PAPER 92-4243] p 28 A93-13350  
Human visual performance model for crewstation design p 182 A93-26887  
Reclined seating in advanced crewstations - Human performance considerations p 186 A93-27151  
Task-analytic evaluations of Space Station Freedom workstations p 187 A93-27157  
Crew performance in Spacelab p 176 A93-27169  
Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323  
Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 A93-19759  
EVA/manned systems p 312 A93-27789  
Evolving technologies for Space Station Freedom computer-based workstations p 313 A93-27794  
Abridged procedural guide to aircrew anthropometric accommodation assessment [AD-A265220] p 366 A93-32006

## CREWS

- Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 A93-12960  
A progressive resistance weight training program designed to improve the armor crewman's strength [AD-A255553] p 53 A93-14556  
Exercise during long term exposure to space: Value of exercise during space exploration p 82 A93-16807  
Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 A93-29406

## CROP GROWTH

- Crop interactions in polyculture and their implications for CELSS design [SAE PAPER 921197] p 295 A93-41373  
Modification of yield and chlorophyll content in leaf lettuce by HPS radiation and nitrogen treatments p 328 A93-44880  
Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce p 357 A93-46468  
Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation p 357 A93-46469  
Minitron II system for precise control of the plant growth environment p 357 A93-46470  
Crop growth and associated life support for a lunar farm p 67 N93-13994  
Engineering verification of the biomass production chamber p 67 N93-13996  
Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997

## CRYOGENICS

- Lunar base thermal management/power system analysis and design p 315 A93-27985

## CRYSTAL STRUCTURE

- Magnetic domain state and coercivity predictions for biogenic greigite (Fe<sub>3</sub>S<sub>4</sub>) - A comparison of theory with magnetosome observations p 38 A93-16481

## CRYSTALLIZATION

- Studies towards the crystallization of the rod visual pigment rhodopsin p 1 A93-11150  
Effects of a microgravity environment on the crystallization of biological macromolecules p 357 A93-45995

## CUES

- Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446  
Acoustical and vibratory stimuli interdependencies and their applications in simulation and cue synchronization [AIAA PAPER 93-3562] p 406 A93-52662  
Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853

- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 N93-29888

- Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display [AD-A264401] p 353 N93-30167  
Auditory spectro-temporal pattern analysis [AD-A264691] p 361 N93-31981

## CUFFS

- Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 N93-14870

## CULTURE (SOCIAL SCIENCES)

- Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277  
Space migrations: Anthropology and the humanization of space p 105 N93-16862

## CULTURE TECHNIQUES

- Chloroflexus aurantiacus and ultraviolet radiation - Implications for Archean shallow-water stromatolites p 400 A93-55999  
Method for culturing mammalian cells in a perfused bioreactor [NASA-CASE-MSC-21293-2] p 4 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor [NASA-CASE-MSC-21294-2] p 5 N93-10110  
Biological conversion of synthesis gas culture development [DE92-001279] p 6 N93-12482  
Phytoplankton photosynthesis in natural mixed layers [AD-A255010] p 39 N93-12871  
Establishing laboratory standards for biological flight experiments [NASA-CR-184402] p 40 N93-12901  
Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 N93-12966  
High density cell culture system [NASA-CASE-MSC-22060-1] p 114 N93-19037  
The development of an automated cell culture system for use in space life science research p 158 N93-21085  
Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 N93-26066  
Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 N93-28759

## CUMULATIVE DAMAGE

- Retinal information processing for minimum laser lesion detection and cumulative damage [AD-A259195] p 171 N93-20563

## CUSHIONS

- Design of a portable powered seat lift p 195 N93-22190

## CUTTING

- The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569

## CYANATES

- Hydrothermal organic synthesis experiments [NASA-CR-191257] p 41 N93-13457

## CYANIDES

- Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations [DOT/FAA/AM-93/8] p 283 N93-27158

## CYCLIC AMP

- Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435  
Effect of heat acclimatization on cAMP level in plasma, cerebrospinal fluid and preoptic area-hypothalamus in hyperthermal rabbits p 199 A93-30437

## CYTOCHROMES

- Observation of change in cytochrome oxidase content of cerebral cortex in rat under +Gz stress p 3 A93-13543  
Nitrogen control of chloroplast development and differentiation [DE92-017392] p 39 N93-12768

## CYTOGENESIS

- Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro p 205 A93-33045

## CYTOLOGY

- To the stars with the cytoskeleton? p 1 A93-11198  
Altered cell function in microgravity p 79 A93-20660  
The pituitary - Aging and spaceflight rats p 79 A93-20661  
Cellular immunosenescence - An overview p 80 A93-20663  
A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727

## SUBJECT INDEX

- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728

- Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745  
Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765  
Flow cytometric analysis of lymphocyte surface markers following a 1-Gy dose of gamma radiation p 281 A93-41170

- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation [DE92-018066] p 5 N93-10974

- Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305

- Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308  
Immunology presentation at the 1990 NASA/NSF Antarctica Biomedical Science Working Group p 81 N93-16806

- Analysis and synthesis of adaptive neural elements and assemblies [AD-A259954] p 219 N93-24247

## CYTOMETRY

- Early markers of HIV infection and subclinical disease progression p 17 N93-11296  
Measuring the metastatic potential of cancer cells p 244 N93-25566

- Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 N93-29620

## CYTOPLASM

- Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933

## D

## DAMAGE

- Microflora of cabins of manned space objects and the problem of biological damage to the structural materials used in them p 262 A93-35237  
Remote surface inspection system --- of large space platforms p 410 A93-55469  
Postoperative hyperbaric oxygen treatment of peripheral nerve damage [AD-A255842] p 52 N93-14084

## DAMAGE ASSESSMENT

- Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286  
The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989 p 118 A93-25201  
The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671  
An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 N93-30818

## DARK MATTER

- Dark matter in the solar system - Hydrogen cyanide polymers p 110 A93-17987

## DARKNESS

- Changes in the dark focus of accommodation associated with simulator sickness p 379 A93-49222

## DATA ACQUISITION

- A physiological signal acquisition and processing system for bed-rest laboratory p 103 A93-19998  
Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 N93-12211  
An improved anthropometric test device p 143 N93-19670

- The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671  
Acquisition and production of skilled behavior in dynamic decision-making tasks [NASA-CR-192361] p 181 N93-20908

- An on-orbit viewpoint of life sciences research p 206 N93-22629

- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400

## DATA BASE MANAGEMENT SYSTEMS

- Distance and organization in multifunction displays p 102 A93-19986

## SUBJECT INDEX

- Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222
- Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502
- DATA BASES**
- Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays  
p 102 A93-19987
- An analysis of human performance in simulated partial-gravity environments  
p 347 A93-42173
- Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222
- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions  
[AD-A252820] p 26 N93-11779
- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables  
[AD-A254681] p 27 N93-12225
- ECLSS evolution: Advanced instrumentation interface requirements. Volume 3: Appendix C  
[NASA-CR-184367] p 64 N93-12990
- Directory of design support methods  
[AD-A256987] p 104 N93-16258
- Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review  
p 126 N93-19697
- Aircraft accident injuries in the Hellenic Air Force in the last 20 years  
p 126 N93-19698
- Medical evaluation of spatial disorientation mishaps  
p 134 N93-19703
- Flight above a virtual world  
p 145 N93-19766
- Toxic substances registry system: Index of material safety data sheets  
[NASA-TM-108582] p 172 N93-20998
- A longitudinal examination of applicants to the air traffic control supervisory identification and development program  
[DOT/FAA/AM-92/16] p 257 N93-25213
- Proceedings of Workshop 1: The Human Brainmap Database  
[AD-A260720] p 258 N93-25654
- Advanced life support study. Modification 10: ECLSS logistical support analysis for Space Station Freedom  
[NASA-CR-192481] p 266 N93-25888
- Age 60 Project: Consolidated database experiments  
[HS-TR-8025-3C(R2)] p 314 N93-27851
- DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field  
[ETN-93-93799] p 284 N93-28469
- DATA COMPRESSION**
- Operator/system communication - An optimizing decision tool  
p 101 A93-19104
- Digital mammography, cancer screening: Factors important for image compression  
p 221 N93-24551
- DATA FLOW ANALYSIS**
- Engineering and technical support of experiments on board the Cosmos-2044 biosatellite  
p 77 A93-18419
- DATA INTEGRATION**
- Interactive and cooperative sensing and control for advanced teleoperation  
p 391 A93-49443
- Multistage integration model for human egomotion perception  
[AIAA PAPER 93-3564] p 406 A93-52664
- DATA LINKS**
- A systems analysis to identify human factors issues and requirements for data link  
p 186 A93-27153
- Human engineering issues for data link systems  
[SAE ARD 50027] p 410 A93-54874
- DATA MANAGEMENT**
- Human performance assessment methods  
[AGARD-AG-308-ADD] p 133 N93-18868
- Advanced cockpit-mission and image management  
p 144 N93-19760
- Management of avionics data in the cockpit  
p 147 N93-19777
- DATA PROCESSING**
- Comparative test data assessment and simplified math modelling for Sabatier CO2 reduction subsystem  
[SAE PAPER 921228] p 296 A93-41402
- A procedure for the frequency analysis of telerobotic tasks data  
p 392 A93-50513
- Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks  
[AD-A257711] p 100 N93-17684
- Automatic information processing and high performance skills  
[AD-A258473] p 132 N93-18273

- Model-based reasoning applied to cockpit warning systems  
p 147 N93-19778
- Retinal information processing for minimum laser lesion detection and cumulative damage  
[AD-A259195] p 171 N93-20563
- Neural processing of gravity information  
[NASA-CR-192766] p 209 N93-23233
- The effects of display and response codes on information processing in an identification task  
[AD-A259531] p 234 N93-23451
- DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field  
[ETN-93-93799] p 284 N93-28469
- An automated processing system for food frequency and nutrition knowledge questionnaire  
p 367 N93-32241
- DATA REDUCTION**
- Transcutaneous Analyte Measuring Methods (TAMM), phase 2  
[AD-A256327] p 54 N93-15192
- DATA SAMPLING**
- Optimal sampling theory and population modelling - Application to determination of the influence of the microgravity environment on drug distribution and elimination  
p 85 A93-17542
- DATA STRUCTURES**
- Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222
- DATA SYSTEMS**
- Dark cycle monitoring of biological specimens on Space Station Freedom  
[SAE PAPER 921393] p 274 A93-41551
- DATA TRANSMISSION**
- Pictorial communication in virtual and real environments  
[ISBN 0-74840-008-7] p 182 A93-26896
- DEATH**
- Melatonin concentrations in the sudden infant death syndrome  
p 203 A93-33030
- Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption  
[AD-A250648] p 23 N93-11893
- DEBRIS**
- Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters  
[NASA-TM-108375] p 6 N93-12174
- DECLARATION**
- A study of human brain somatosensory evoked potential and its application to man-machine-environment system engineering - Preliminary exploration of SEP in normal adult  
p 12 A93-13719
- The effect of variable seat back angles on human response to +Gz impact accelerations  
[AD-A250673] p 31 N93-11559
- DECISION MAKING**
- Keeping the pilot in the loop  
p 29 A93-13413
- The 'artful' decision maker - A framework model for aeronautical decision making  
p 56 A93-15662
- Predicting individual differences in complex skill acquisition - Dynamics of ability determinants  
p 181 A93-28731
- Dynamic multiobjective decision and its application in environmental control and life support system  
p 230 A93-30439
- Compatibility and consistency in display-control systems - Implications for aircraft decision aid design  
p 230 A93-30454
- The role of mental models in team performance in complex systems  
p 262 A93-34985
- A study of decision making and performance in rejected takeoffs  
[SAE PAPER 921134] p 287 A93-41322
- Risk assessment and clinical aeromedical decision-making  
p 385 A93-52305
- Intelligent sensing and control for advanced teleoperation  
p 409 A93-54158
- Flight leads and crisis decision-making  
p 404 A93-55161
- Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222
- Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles  
[AD-A254983] p 35 N93-12508
- Decision making in a dynamic task environment: The effect of time pressure  
[AD-A256557] p 58 N93-14602
- Development and enhancement of a model of performance and decision making under stress in a real life setting  
[AD-A255699] p 99 N93-16111

## DEDUCTION

- Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary  
[AD-A257016] p 99 N93-16189
- Cognitive and affective components of mental workload: Understanding the effects of each on human decision making behavior*  
p 99 N93-16783
- Development and enhancement of a mode of performance and decision making under stress in a real life setting  
[AD-A257796] p 123 N93-18363
- Modeling the dynamics of mental workload and human performance in complex systems  
[AD-A258553] p 135 N93-19956
- Acquisition and production of skilled behavior in dynamic decision-making tasks  
[NASA-CR-192361] p 181 N93-20908
- Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502
- Organizational politics, participation in decision-making, and job satisfaction  
[DOT/FAA/AM-92/17] p 257 N93-25203
- How expert pilots think: Cognitive processes in expert decision making  
[DOT/FAA/RD-93/9] p 288 N93-27103
- Specification of adaptive aiding systems  
[AD-A263071] p 314 N93-27927
- Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing  
p 317 N93-28853
- Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA  
[DE93-001923] p 321 N93-28942
- DECISION THEORY**
- Decision paths in complex tasks  
[NASA-CR-192121] p 132 N93-18359
- Theory of signal detection and its application to visual target acquisition: A review of the literature  
[AD-A262920] p 288 N93-28307
- A decision-theoretic approach to the display of information for time-critical decisions: The Vista project  
p 367 N93-32152
- DECOMPRESSION SICKNESS**
- The influence of prior exercise at anaerobic threshold on decompression sickness  
p 8 A93-10333
- Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness  
p 46 A93-16153
- Failure of the straight-line DCS boundary when extrapolated to the hypobaric realm  
p 47 A93-16154
- The role of ground level oxygen in the treatment of altitude chamber decompression sickness  
p 89 A93-18043
- Motor activity of animals under elevated pressure  
p 75 A93-18290
- Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure  
p 76 A93-18296
- A method for the theoretical calculation of the parameters of single-stage decompression with equal probability of safety  
p 160 A93-26832
- Rationale for a hyperbaric treatment capability at a Lunar Station  
p 213 A93-30286
- Ultrasonic location of gas bubbles in the vascular bed of a person working in a space suit  
p 262 A93-35239
- Medical care on the moon  
p 331 A93-42126
- Variability over time of complement activation induced by air bubbles in human and rabbit sera  
p 323 A93-42190
- Complement proteins and decompression sickness susceptibility  
[AD-A254448] p 50 N93-12905
- Statistically based decompression tables 8: Linear-exponential kinetics  
[AD-A257613] p 120 N93-17926
- The Proceedings of the Hypobaric Decompression Sickness Workshop  
[AD-A257612] p 123 N93-18362
- Statistically based decompression tables 7: Selection and treatment of primary air and N2O2 data  
[AD-A259090] p 172 N93-20587
- Hyperbaric treatment  
p 360 N93-31454
- DECONDITIONING**
- Effects of acute exercise on attenuated vagal baroreflex function during bed rest  
p 48 A93-16160
- DECONTAMINATION**
- Use of sorption technology for treatment of humidity condensate for potable water  
[SAE PAPER 921312] p 303 A93-41474
- Defining contamination control requirements for non-human research on Space Station Freedom  
[SAE PAPER 921386] p 308 A93-41544
- DEDUCTION**
- The position test: A computer generated process for acquisition of inductive logic thinking  
p 343 N93-31232

## DEEP WATER

### DEEP WATER

- Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments p 80 A93-20672

### DEFECTS

- Remote surface inspection system --- of large space platforms p 410 A93-55469  
Effects of space radiation on humoral and cellular immunity in rhesus monkeys p 246 A93-26259  
[AD-A261808]

### DEGASSING

- Development of membrane gas removal technology for microgravity liquid flow systems p 294 A93-41344  
[SAE PAPER 921162]

### DEGENERATION

- Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high +Gz forces p 384 A93-52298  
An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 A93-30818

### DEGRADATION

- The effects of wearing protective chemical warfare combat clothing on human performance p 35 A93-12491  
[AD-A250716]

### DEGREES OF FREEDOM

- Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier p 65 A93-13486

### DEHUMIDIFICATION

- Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air p 304 A93-41483  
[SAE PAPER 921321]  
A novel membrane device for the removal of water vapor and water droplets from air p 304 A93-41484  
[SAE PAPER 921322]

### DEHYDRATION

- Influence of graded dehydration on hyperthermia and cardiovascular drift during exercise p 44 A93-14971  
Hydrothermal dehydration of aqueous organic compounds p 397 A93-53291  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise p 255 A93-26133  
[NASA-TM-103942]

### DEHYDROGENATION

- Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670

### DEMOLITION

- Demodulation processes in auditory perception p 54 A93-15053  
[AD-A255748]

### DEMOGRAPHY

- Poststrike air traffic control trainees - Biodemographic predictors of success in selection and screening p 56 A93-15664  
Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988 p 265 A93-25628  
[AD-A260869]

### DEOXYRIBONUCLEIC ACID

- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728  
Responses of *Bacillus subtilis* spores to space environment - Results from experiments in space p 268 A93-36556  
Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560  
In vitro selection of optimal DNA substrates for T4 RNA ligase p 329 A93-44939  
Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection p 397 A93-52878  
DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580

- Radiation damage to DNA p 5 A93-10834  
[DE92-015760]

- AFRR reports p 49 A93-12649  
[AD-A254581]  
Measuring the metastatic potential of cancer cells p 244 A93-25566

- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels p 246 A93-26587  
[DE93-007815]

- Comparative mutagenesis of human cells in vivo and in vitro p 276 A93-28651  
[DE93-012269]

- Mechanisms of microwave induced damage in biologic materials p 358 A93-32035  
[AD-A264415]

### DEPENDENT VARIABLES

- Study design for microgravity human physiology experiments p 118 A93-25208

### DEPLOYMENT

- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm p 171 A93-20580  
[AD-A259243]

### DEPTH

- Anisotropy in an ambiguous kinetic depth effect p 55 A93-14097

### DERMATITIS

- Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776

### DESCENT TRAJECTORIES

- HUD climb/dive ladder configuration and unusual attitude recovery p 185 A93-27129  
The effects of head and sensor movement on flight profiles during simulated dive bombing p 185 A93-27131

### DESIGN ANALYSIS

- The optimum design of personal liquid cooling system p 60 A93-14314  
Industrial design influence on today's flight decks p 61 A93-14378  
Visual display aid for orbital maneuvering - Design considerations p 135 A93-23518  
The Space Station Remote Manipulator System p 138 A93-25487  
The Servicing Aid Tool --- teleoperated manipulation system for space shuttle orbiters p 192 A93-29116  
Anthropometry for HMD design --- using three-dimensional quantitative morphology p 229 A93-30069  
An operator interface design for a telerobotic inspection system p 231 A93-31034  
[AIAA PAPER 93-1160]  
Glovebox design for Space Station Freedom Crew Health Care System p 292 A93-41326  
[SAE PAPER 921139]  
Design of a Shuttle air and water prefilter for reduced gravity operation p 294 A93-41343  
[SAE PAPER 921161]  
Conceptual design of ECLSS microgravity test beds p 294 A93-41346  
[SAE PAPER 921164]  
Lunar habitats - Places for people p 344 A93-41991

- Design guide for the ergonomic aspects of helicopter crew seating p 65 A93-13464  
[ISVR-TR-209]  
The environmental control and life-support system for a lunar base: What drives its design p 66 A93-13991  
Human factors design principles for instrument approach procedure charts. Volume 1: Readability p 104 A93-15968  
[AD-A257234]  
Preliminary design of a radiator shading device for a lunar outpost p 139 A93-18019  
[NASA-CR-192016]  
Helmet-mounted area-of-interest display p 139 A93-18029  
[AD-A258275]  
Design requirements for force reflecting master controllers p 139 A93-18035  
Space Station ECLSS integration analysis p 195 A93-22002  
[NASA-CR-192470]  
Optimal design of composite hip implants using NASA technology p 174 A93-22188  
Design of a portable powered seat lift p 195 A93-22190

- Human factors engineering: A key element of instrumentation and control system design p 264 A93-25415  
[DE93-006731]  
Advanced life support study. Modification 10: ECLSS logistical support analysis for Space Station Freedom p 266 A93-25888  
[NASA-CR-192481]  
Ergonomic development of digital map displays p 320 A93-28866

### DESYNCHRONIZATION (BIOLOGY)

- Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214

### DETECTION

- The effects of history and predictive information on the ability of the transport aircraft pilot to predict an alert p 365 A93-46810  
Biochemically active layers for selective material detection sensors p 158 A93-20959  
[MBB-Z-0440-92-PUB]  
The challenge of biodetection for screening persons carrying explosives p 159 A93-21931  
Explosives search dogs p 159 A93-21933  
Sensory sensitivities and discriminations and their roles in aviation p 224 A93-23479  
[AD-A259742]  
Automated system for early breast cancer detection in mammograms p 253 A93-25568  
Automatic detection of seizures with applications p 254 A93-25592

- Pseudomonas screening assay p 245 A93-25994  
[NASA-CASE-NPO-17653-1-CU]

### DEVELOPING NATIONS

- Communicable diseases: A major burden of morbidity and mortality p 18 A93-11300

### DEW POINT

- Dew point analysis for Space Station Freedom p 296 A93-41401  
[SAE PAPER 921227]

### DIAGNOSIS

- Value of frequency domain correlative cardiography (FCG) to early diagnosis of coronary heart disease p 10 A93-13705  
Electroencephalogram epileptiform abnormalities in candidates for aircrew training p 170 A93-28757  
Hypertension and the probability of an incapacitating event over a defined period - Impact of treatment p 215 A93-32777  
Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226  
Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713  
New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774  
Case report - Chronic sub-dural hematoma following high-speed ejection p 282 A93-41171  
Phadiatop: A screening test for inhalant allergy p 21 A93-11313  
In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automated enzyme immunoassay method to dose specific IgE p 21 A93-11314  
Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF) p 21 A93-11316  
Allergic and nonallergic rhinitis in Greek pilots p 21 A93-11317

- A study of illness related lost time in transport aircraft crewmembers p 132 A93-18298  
[AD-A258193]  
Stress resistance as a diagnostic category in air traffic controller selection p 219 A93-24092  
[DLR-FB-92-13]  
A fiber optic probe for the detection of cataracts p 254 A93-25593  
Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia p 275 A93-28212  
[FOA-B-0422-4.4]  
Proceedings of a Workshop on Molecular Nuclear Medicine p 285 A93-28835  
[DE93-010828]  
Fuzzy neural network methodology applied to medical diagnosis p 334 A93-29546  
Fundamental diagnostic hematology: Anemia (second edition) p 338 A93-31140  
[PB93-188662]  
Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) p 338 A93-31158  
[PB93-188670]

### DIAPHRAGM (ANATOMY)

- An analysis of the respiratory muscle fatigue under resistive loading when breathing gas mixtures containing different amounts of oxygen p 76 A93-18299

### DIASTOLIC PRESSURE

- Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321

### DIETS

- Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats p 77 A93-19994  
A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918  
Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029  
Smoking status and body composition, exercise, dietary intake, and alcohol/coffee consumption p 23 A93-11893  
[AD-A250648]  
Crop growth and associated life support for a lunar farm p 67 A93-13994

- Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALS) p 121 A93-18209  
[AD-A258364]

- Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge p 337 A93-30894  
[AD-A264260]

- An automated processing system for food frequency and nutrition knowledge questionnaire p 367 A93-32241

- Nutritional assessment of United States tactical air command pilots p 367 A93-32242

- Protein requirements in hypoxia or hypokinesia p 368 A93-32244

- Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 A93-32256

## SUBJECT INDEX

- The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas p 369 N93-32257
- Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots p 369 N93-32258
- The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259
- The effects of an antijet lag diet p 370 N93-32263
- ### DIFFERENCE EQUATIONS
- Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise p 269 A93-36564
- ### DIFFERENTIAL AMPLIFIERS
- Investigation into the common mode rejection ratio of the physiological signal conditioner circuit p 245 N93-26073
- ### DIFFERENTIATION (BIOLOGY)
- The earliest fossil evidence for sexual dimorphism in primates p 152 A93-27775
- Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro p 205 A93-33045
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- ### DIFFUSION
- Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167
- ### DIGESTING
- Comparative mutagenesis of human cells in vivo and in vitro [DE93-012269] p 276 N93-28651
- ### DIGESTIVE SYSTEM
- Effects of gravity on gastric emptying, intestinal transit, and drug absorption p 85 A93-17543
- Formation of the hypokinetic syndrome in the digestive system under conditions of weightlessness p 119 A93-25600
- ### DIGITAL SIMULATION
- The dynamic mathematical model and digital simulation of the environmental control system p 61 A93-14319
- ### DIGITAL TECHNIQUES
- Human vision, visual processing, and digital display II: Proceedings of the Meeting, San Jose, CA, Feb. 27-Mar. 1, 1991 [SPIE-1453] p 137 A93-25363
- Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 N93-15825
- ### DIMERS
- Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing [DE93-006411] p 210 N93-24028
- ### DIPHTHERIA
- Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304
- ### DIPOLE MOMENTS
- Adaptive filters for monitoring localized brain activity from surface potential time series [DE93-003795] p 217 N93-22774
- ### DIRECTORIES
- Directory of design support methods [AD-A256987] p 104 N93-16258
- ### DISABILITIES
- Compliant walker [NASA-CASE-GSC-13348-2] p 53 N93-14708
- ### DISCRIMINATION
- Sensory sensitivities and discriminations and their roles in aviation [AD-A259742] p 224 N93-23479
- ### DISEASES
- Skin care in the space environment p 170 A93-28756
- The Proceedings of the Hypobaric Decompression Sickness Workshop [AD-A257612] p 123 N93-18362
- Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 N93-28759
- Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 N93-28835
- Gene transcription and electromagnetic fields [DE93-010854] p 276 N93-28848
- The AFOSR Workshop on the Future of EEG and MEG [AD-A264338] p 335 N93-30160
- Survey of smoking habits in the Spanish Air Force p 370 N93-32262

## DISORDERS

- New techniques for positron emission tomography in the study of human neurological disorders p 23 N93-11873
- Prevention of cumulative trauma disorders [PB93-18832] p 338 N93-31138

## DISORIENTATION

- Spatial disorientation and dysfunction of orientation/equilibrium reflexes - Aeromedical evaluation and considerations p 8 A93-10336
- Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991 p 133 N93-19679
- Disorientation and flight safety: A survey of UK Army aircrew p 133 N93-19680
- Medical evaluation of spatial disorientation mishaps p 134 N93-19703

## DISPLAY DEVICES

- Design of a display system for a human pilot's supervisory tasks p 27 A93-11201
- Advanced displays for military operations [AIAA PAPER 92-4243] p 28 A93-13350
- Human factors on advanced flight decks: Proceedings of the Conference, London, United Kingdom, Mar. 14, 1991 [ISBN 0-903409-85-2] p 29 A93-13408
- Airline training for advanced technology cockpits p 24 A93-13411
- Keeping the pilot in the loop p 29 A93-13413
- Vision modelling applications for display optimisation p 29 A93-13414
- Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416
- Methodology for ergonomic tests of the information display on monitor indicators p 101 A93-18530
- Graphical displays - Implications for divided attention, focused attention, and problem solving p 102 A93-19984
- Choosing specifiers - An evaluation of the basic tasks model of graphical perception p 102 A93-19985
- Distance and organization in multifunction displays p 102 A93-19986
- Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays p 102 A93-19987
- Spatial judgments with monoscopic and stereoscopic presentation of perspective displays p 102 A93-19988
- Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990
- Visual display aid for orbital maneuvering - Design considerations p 135 A93-23518
- Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519
- Incorporating display limitations in a model-based analysis of flight simulator fidelity [AIAA PAPER 93-0859] p 137 A93-24923
- Human vision, visual processing, and digital display II: Proceedings of the Meeting, San Jose, CA, Feb. 27-Mar. 1, 1991 [SPIE-1453] p 137 A93-25363
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- Virtual display aids for teleoperation p 183 A93-27029
- Display format and highlight validity effects on search performance using complex visual displays p 187 A93-27160
- Exocentric judgements in real environments and stereoscopic displays p 189 A93-27190
- Human factors issues in the use of night vision devices p 189 A93-27193
- Visual augmentation and scene detail effects in flight training p 180 A93-27454
- USAF/USN fixed wing night vision - The mission p 227 A93-30055
- The realities of using visually coupled systems for training applications p 228 A93-30063
- Visual illusions and other effects with night vision devices p 230 A93-30072
- Compatibility and consistency in display-control systems - Implications for aircraft decision aid design p 230 A93-30454
- Factors that affect depth perception in stereoscopic displays p 230 A93-30455
- Human stereopsis p 223 A93-30456
- Proposed evaluation framework for assessing operator performance with multisensor displays p 232 A93-33444
- A teleoperation training simulator with visual and kinesthetic force virtual reality p 233 A93-33448
- An exploratory study of plan-view terrain displays for air carrier operations p 289 A93-39573
- Instrument-approach-plate design considerations for displaying radio frequencies p 289 A93-39574

## DISSOLVED GASES

- Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements p 287 A93-40772
- The effect of geometric field of view and tunnel design for perspective flight-path displays [SAE PAPER 921131] p 291 A93-41319
- High level organizing principles for display of systems fault information for commercial flight crews p 388 A93-52187
- A comparative evaluation of three take-off performance monitor display types [AIAA PAPER 93-3608] p 406 A93-52669
- Depth-viewing-volume increase by collimation of stereo 3-D displays p 407 A93-52915
- Stereoscopic displays and applications III: Proceedings of the Meeting, San Jose, CA, Feb. 12, 13, 1992 [SPIE-1669] p 408 A93-53119
- A low cost helmet-mounted camera/display system for field testing teleoperator tasks p 408 A93-53122
- User evaluation of a stereoscopic display for space training applications p 408 A93-53123
- Virtual landings --- developing Enhanced Vision Systems for VFR p 410 A93-54868
- Telemanipulation experiment using predictive display p 411 A93-56256
- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 N93-10713
- Advanced technology for portable personal visualization [AD-A253808] p 32 N93-11783
- Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 N93-11784
- Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis p 33 N93-11941
- A spurious pop-out in visual search [AD-A256548] p 57 N93-14267
- High-resolution contrast control on a video display: Method and calibration [AD-A256552] p 60 N93-15400
- Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 N93-15968
- Helmet-mounted area-of-interest display [AD-A258275] p 139 N93-18029
- The effects of iconic presentation on individuals [AD-A258785] p 133 N93-18949
- Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104
- Engineering the visibility of small features on electronic flight displays p 144 N93-19758
- Multimodal dialog system for future cockpits p 146 N93-19773
- The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 N93-19782
- Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data [AD-A259684] p 234 N93-23660
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 N93-28850
- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 N93-28855
- The design and development of the new RAF standard HUD format p 318 N93-28856
- Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857
- Head-steered sensor flight test results and implications p 318 N93-28859
- Oculo-motor responses and virtual image displays p 319 N93-28862
- Ergonomic development of digital map displays p 320 N93-28866
- Head mounted displays for virtual reality [AD-A263498] p 322 N93-29340
- A tutorial on exit pupils and eye rotation with virtual image optical displays [AD-A262399] p 333 N93-29400
- The effects of superimposing symbology on a simulated night vision goggle display [AD-A263458] p 354 N93-30590
- ### DISRUPTING
- Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 N93-27989
- ### DISSOLVED GASES
- Measurement of free and dissolved gas content of water samples on Space Station Freedom [SAE PAPER 921267] p 300 A93-41437

## DISTILLATION

### DISTILLATION

- Gray water recycling with a unique vapor compression distillation (VCD) design  
[SAE PAPER 921318] p 304 A93-41480
- Water reclamation technology development for future long range missions  
[SAE PAPER 921351] p 306 A93-41510
- Experimental and theoretical study on membrane distillation using thermopervaporation  
[SAE PAPER 921397] p 309 A93-41554
- Technology development for lunar base water recycling  
p 67 N93-13999

### DISTILLATION EQUIPMENT

- An update on the readiness of vapor compression distillation for spacecraft wastewater processing  
[SAE PAPER 921114] p 290 A93-41307

### DISTORTION

- Evaluation of lens distortion errors in video-based motion analysis  
[NASA-TP-3266] p 258 N93-25736

### DISTRIBUTED PARAMETER SYSTEMS

- Distributed environmental control p 32 N93-11924

### DIURESIS

- Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT  
p 163 A93-28688
- Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men  
[NASA-TM-103949] p 6 N93-12014

### DIURETICS

- The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident  
[AD-A254550] p 49 N93-12612

### DIURNAL VARIATIONS

- Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658
- Sleep and circadian rhythms p 94 A93-20659
- Diurnal rhythmicity of human orthostatic stability p 250 A93-35253

- Stimulation of lettuce productivity by manipulation of diurnal temperature and light p 327 A93-44879
- Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses  
[AD-A254129] p 13 N93-10661

- Neurochemical control of circadian rhythms  
[AD-A255054] p 50 N93-13116

- Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates  
[DE93-007677] p 207 N93-22913

- Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms  
[AD-A259803] p 217 N93-23459

### DIVING (UNDERWATER)

- Subjective and behavioral effects associated with repeated exposure to narcosis p 7 A93-10327
- Failure of the straight-line DCS boundary when extrapolated to the hypobaric realm p 47 A93-16154
- T wave changes in humans and dogs during experimental dives p 92 A93-20026
- Vestibular problems in diving and in space p 169 A93-28747

- Statistically based decompression tables 8: Linear-exponential kinetics  
[AD-A257613] p 120 N93-17926

- Statistically based decompression tables. 7: Selection and treatment of primary air and N2O2 data  
[AD-A259090] p 172 N93-20587

- Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m  
[DLR-FB-92-14] p 219 N93-24093

### DOGS

- Explosives search dogs p 159 N93-21933

### DOPA

- Effect of DL-DOPA, L-5-HTP and pentobarbital sodium on brain encephalofluorographs in rats p 2 A93-13530

- Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029

- Tyrosine - Effects on catecholamine release p 204 A93-33038

- Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans p 332 A93-44180

### DOPPLER EFFECT

- Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533

- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC)  
[AD-A264492] p 335 N93-30400

### DOSAGE

- Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems p 20 N93-11310

- Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products  
[AD-A255224] p 51 N93-13941

- Nifedipine for treatment of high altitude pulmonary edema  
[AD-A256959] p 95 N93-16187

- A linear, time-varying simulation of the respiratory tract system  
[DE93-004515] p 218 N93-24009

- The chronic effects of JP-8 jet fuel exposure on the lungs  
[AD-A264162] p 334 N93-30153

### DOSIMETERS

- Radiation dose measurement and biostack experiment in biocabin on board satellite p 327 A93-44845

- Radiation physics, biophysics, and radiation biology  
[DE92-013673] p 6 N93-12266

- The development of an automated cell culture system for use in space life science research p 158 N93-21085

- Measuring hearing protection device performance using the metrosonics db-3100 sound level analyzer (dosimeter)  
[AD-A260852] p 265 N93-25787

### DOWN-CONVERTERS

- Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-191618] p 110 N93-15825

- Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-191807] p 110 N93-16709

- Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-193137] p 322 N93-28895

### DRILLING

- The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569

### DRINKING

- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise  
[NASA-TM-103942] p 255 N93-26133

### DROP TOWERS

- Short-term microgravity to isolate graviperception in cells p 111 A93-21901

### DROSOPHILA

- Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster* p 1 A93-11691

### DRUGS

- Drug effects on orthostatic intolerance induced by bedrest p 86 A93-17544

- An individual differences approach to fitness-for-duty assessment p 178 A93-27178

- A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918

- Rated performance, cardiovascular and quantitative EEG parameters during simulated instrument flight under the effect of terfenadine p 165 A93-28708

- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728

- Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703

- Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness p 327 A93-44842

- Protective effects of *Rhodiola crenulata* on rats under antihypertensive position and professional athletes p 327 A93-44843

- Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 N93-11307

- Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems p 20 N93-11310

- Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine p 20 N93-11311

- The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312

- The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB  
[AD-A254840] p 27 N93-12432

- The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident  
[AD-A254550] p 49 N93-12612

- Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis  
[AD-A255582] p 95 N93-16041

- Nifedipine for treatment of high altitude pulmonary edema  
[AD-A256959] p 95 N93-16187

- Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 N93-17817

- Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program  
[DOT/FAA/AM-92/15] p 218 N93-24088

- Immunoconjugates: Magic bullets for cancer therapy? p 253 N93-25567

- Analysis of neural systems involved in modulation of memory storage  
[AD-A262418] p 283 N93-27654

- Pharmacokinetics and Pharmacodynamics in Space  
[NASA-CP-10048] p 333 N93-29502

### DUMMIES

- Hybrid 2 and hybrid 3 dummy neck properties for computer modeling  
[AD-A255544] p 66 N93-13874

- Design/development of an enhanced biodynamic manikin p 142 N93-19667

- Improving manikin biofidelity p 142 N93-19668

- The design and use of automotive crash test dummies p 142 N93-19669

- The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671

### DUST COLLECTORS

- Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979

### DYNAMIC CHARACTERISTICS

- Dynamic characteristic of changes of oxygen saturation of blood hemoglobin under conditions of acute hypoxia in human body p 91 A93-19993

- Hybrid 2 and hybrid 3 dummy neck properties for computer modeling  
[AD-A255544] p 66 N93-13874

### DYNAMIC LOADS

- Sudden loading and fatigue effects on the human spine  
[PB93-167526] p 286 N93-29199

### DYNAMIC MODELS

- Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222

- The dynamic mathematical model and digital simulation of the environmental control system p 61 A93-14319

- EVA Glove Research Team  
[NASA-CR-193014] p 313 N93-27847

### DYNAMIC PROGRAMMING

- Dynamic multiobjective decision and its application in environmental control and life support system p 230 A93-30439

### DYNAMIC RESPONSE

- A study of biological effects and characteristics of dynamic responses of organism on landing impact p 10 A93-13533

- Investigation of nonlinear dynamic responses to random vibration in dogs p 4 A93-13722

- Response characteristics of the human torsional vestibuloocular reflex p 215 A93-32774

- Evaluation and estimation of handling qualities via statistical modeling of pilot response data  
[AD-A255324] p 69 N93-14548

- Improving manikin biofidelity p 142 N93-19668

- A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672

### DYNAMIC STRUCTURAL ANALYSIS

- A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849

- Power assist EVA glove development p 314 N93-27850

### DYNAMIC TESTS

- Design guide for the ergonomic aspects of helicopter crew seating  
[ISVR-TR-209] p 65 N93-13464

- Hybrid 2 and hybrid 3 dummy neck properties for computer modeling  
[AD-A255544] p 66 N93-13874

- Occupant simulation as an aspect of flight safety research p 142 N93-19665

### DYNAMICAL SYSTEMS

- Self-programming of matter and the evolution of proto-biological organizations  
[DE92-015244] p 5 N93-10628

### DYNAMOMETERS

- Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers  
[NASA-CR-185679] p 34 N93-12195

- Prevention of cumulative trauma disorders  
[PB93-188332] p 338 N93-31138



## E

## EAR

- The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555  
Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 N93-22800

## EAR PROTECTORS

- Measuring hearing protection device performance using the metrosonics db-3100 sound level analyzer (dosimeter) p 265 N93-25787  
Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 N93-29406

## EARDRUMS

- Barotrauma in Boeing 737 cabin crew p 278 A93-39706

## EARPHONES

- Headphone localization of speech stimuli p 176 A93-27143  
Headphone localization of speech p 394 A93-52507

## EARTH (PLANET)

- Comets and the formation of biochemical compounds on the primitive earth - A review p 109 A93-17977  
The fate of organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite p 110 A93-17984

## EARTH ENVIRONMENT

- K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions p 90 A93-18406  
K.E. Tsiolkovsky on the problem of human survival in extreme environments (On the earth and in space) p 77 A93-18407  
Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture [SAE PAPER 921193] p 295 A93-41371  
JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-024] p 40 N93-13033

## EARTH ORBITAL ENVIRONMENTS

- Visual display aid for orbital maneuvering - Design considerations p 135 A93-23518  
Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519  
Task-analytic evaluations of Space Station Freedom workstations p 187 A93-27157  
Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems [SAE PAPER 921258] p 299 A93-41428  
LIAC - A closed ecosystem research facility --- Life In A Can p 347 A93-42129  
Space Station Freedom payload operations in the 21st century p 350 A93-45436

## EARTH ORBITS

- SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 N93-18153  
United States Army space experiment 601 [AD-A261460] p 260 N93-26353

## EARTH SURFACE

- Liquid water and the origin of life p 268 A93-36552  
The violent environment of the origin of life - Progress and uncertainties p 412 A93-53292

## EATING

- Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 A93-49180  
Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 N93-20384

## ECHOGRAPHY

- Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551

## ECOLOGICAL

- Biofilm ecology of bioluminescent bacteria [AD-A255282] p 42 N93-14532  
Mathematics and biology: The interface, challenges and opportunities [DE92-041207] p 82 N93-17359  
Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle [NASA-CR-4497] p 269 N93-26157

## ECOSYSTEMS

- Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms p 101 A93-18418  
Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877

- Scaling issues for biodiversity protection [DE92-016689] p 6 N93-12315  
Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997  
The production and use of aeroponically grown inocula of VAM fungi in the native plant nursery [PB92-204973] p 43 N93-15208  
Life support and self-sufficiency in space communities p 105 N93-16866  
Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628  
CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 N93-24401  
Ecosystems on Earth and in space (the possible utilization of artificial ecosystems for space life support systems) p 236 N93-24406  
JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-020] p 244 N93-25406
- EDEMA**  
High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709  
Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186  
Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177  
Nifedipine for treatment of high altitude pulmonary edema [AD-A256959] p 95 N93-16187
- EDGES**  
Neuropsychological components of object identification [AD-A261449] p 259 N93-26347
- EDUCATION**  
Ground based simulation in test and evaluation education [AIAA PAPER 92-4066] p 24 A93-11252  
Training for avionics evaluation [AIAA PAPER 92-4068] p 24 A93-11254  
C.R.M. training for the advanced flight deck p 24 A93-13410  
Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835  
Questioning mechanisms during complex learning [AD-A247382] p 26 N93-11415  
Introduction to training decisions modeling technologies: The training decisions system [AD-A249862] p 27 N93-12252  
Suited for spacewalking: A teacher's guide with activities [NASA-EP-279] p 65 N93-13692  
A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity [AD-A255926] p 52 N93-14109  
Body composition and physical performance [AD-A255627] p 69 N93-14161  
A progressive resistance weight training program designed to improve the armor crewman's strength [AD-A255553] p 53 N93-14556  
Training, muscle fatigue and stress fractures [AD-A255277] p 54 N93-15006  
Development of a prototype interactive learning system using multi-media technology for mission independent training program p 100 N93-17310  
Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks [AD-A257711] p 100 N93-17684  
The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training [AD-A258025] p 131 N93-17919  
The US Navy Healthy Back Program: Effect on back knowledge among recruits [AD-A258368] p 121 N93-18210  
Night vision goggle training: Development and production of six video programs [AD-A258529] p 148 N93-20050  
Prologue to Action. Life Sciences Education and Science Literacy [PB93-107514] p 159 N93-21230  
Instructions and advance training measures for the improvement of human reliability [MBB-FE-313-S-PUB-0500] p 181 N93-21402  
Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool [AD-A258531] p 195 N93-21753  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382  
The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 N93-26082

- Contribution of personality to the prediction of success in initial air traffic control specialist training [DOT/FAA/AM-93/4] p 259 N93-26138  
Spontaneous discovery and use of categorical structure [AD-A261658] p 260 N93-26364  
A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks p 367 N93-32151

## EFFERENT NERVOUS SYSTEMS

- Evaluation of finger motor reaction in flyer when handling throttle and stick p 29 A93-13539  
K.E. Tsiolkovsky on individual time perception and some characteristics of intuitive perception of the properties of time at different levels of motor activity and health p 98 A93-18413  
The central nervous connections involved in motion induced emesis p 399 A93-55931  
Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146

## EFFLUENTS

- Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems [SAE PAPER 921272] p 301 A93-41442  
Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 N93-26066

## EGGS

- Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745  
Altering the position of the first horizontal cleavage furrow of the amphibian (Xenopus) egg reduces embryonic survival p 272 A93-39717

## EJECTION

- An epidemiological study in SAF's pilots ejections p 143 N93-19699

## EJECTION INJURIES

- Fractures of the vertebral column after ejection p 46 A93-15575  
Case report - Chronic sub-dural hematoma following high-speed ejection p 282 A93-41171

## EJECTION SEATS

- Windblast tolerance of human thorax and abdomen p 91 A93-19992  
Investigation on requirements for ejection acceleration measuring system p 332 A93-44847  
The limits of human impact acceleration tolerance [AIAA PAPER 93-3572] p 400 A93-52692  
The effect of variable seat back angles on human response to +Gz impact accelerations [AD-A250673] p 31 N93-11559  
Improving manikin biodeficiency p 142 N93-19668  
An epidemiological study in SAF's pilots ejections p 143 N93-19699

## ELASTIC PROPERTIES

- Power assist EVA glove development [SAE PAPER 921255] p 299 A93-41425  
Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764  
Power assist EVA glove development p 314 N93-27850

## ELBOW (ANATOMY)

- Prosthetic elbow joint [NASA-CASE-MFS-28707-1] p 354 N93-30566

## ELECTRIC CONNECTORS

- Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065

## ELECTRIC CONTACTS

- Directory of design support methods [AD-A256987] p 104 N93-16258

## ELECTRIC CURRENT

- Kinetic studies of interfacial photocurrents in platinized chloroplasts [DE93-002344] p 211 N93-25104

## ELECTRIC FIELDS

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 [DE92-040153] p 41 N93-13503  
Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 [DE92-040152] p 41 N93-13520  
Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 N93-16166  
Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552



Health effects of low-frequency electric and magnetic fields

[DE93-005675] p 127 N93-19838

Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates

[DE93-007677] p 207 N93-22913

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates

[DE93-007678] p 211 N93-24455

Potential human health effects associated with power frequency electric and magnetic fields

[PB93-132678] p 221 N93-24590

#### ELECTRIC GENERATORS

Format and structure of a database on health and environmental impacts of different energy systems for electricity generation

[DE92-634160] p 12 N93-10222

#### ELECTRIC POWER SUPPLIES

Manned lunar surface site

p 316 N93-28033

#### ELECTRIC STIMULI

Illusions of visual-target motion caused by electrical vestibular stimuli

p 119 A93-25653

#### ELECTRIC WIRE

Potential human health effects associated with power frequency electric and magnetic fields

[PB93-132678] p 221 N93-24590

#### ELECTRO-OPTICS

Human visual limitations on suprathreshold contrast perception through ANVIS

[AD-A259970] p 226 N93-24431

The quest for an integrated flying helmet

p 319 N93-28860

#### ELECTROCARDIOGRAPHY

Subtraction of 50 Hz interference from electrocardiogram by using cycle averaging method

p 11 A93-13714

T wave changes in humans and dogs during experimental dives

p 92 A93-20026

Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s

[AD-A255691] p 52 N93-14103

MAC to VAX connectivity: Heart rate spectral analysis system

p 254 N93-25594

Investigation into the common mode rejection ratio of the physiological signal conditioner circuit

p 245 N93-26073

#### ELECTROCHEMISTRY

Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process

[SAE PAPER 921275] p 301 A93-41444

#### ELECTRODES

New technologies for in-flight pasteless bioelectrodes

p 289 A93-41174

#### ELECTROENCEPHALOGRAPHY

Cortical localization of cognitive function by regression of performance on event-related potentials

p 9 A93-10337

Effect of DL-DOPA, L-5-HTP and pentobarbital sodium on brain encephalofluorographs in rats

p 2 A93-13530

The effects of exposure to 50 mT ELF magnetic fields for 96 h on rabbit EEG

p 4 A93-13712

The evaluation of tolerance to serious acute hypoxia in humans

p 11 A93-13715

EEG changes in man during motion sickness induced by parallel swing

p 92 A93-19996

Spectral analysis of the electroencephalographic response to motion sickness

p 116 A93-24041

Rated performance, cardiovascular and quantitative EEG parameters during simulated instrument flight under the effect of terfenadine

p 165 A93-28708

Electroencephalogram epileptiform abnormalities in candidates for aircrew training

p 170 A93-28757

Self-organizing character of alpha wave in EEG due to acute hypoxic hypoxia in normal subjects

p 213 A93-30436

The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB

[AD-A254840] p 27 N93-12432

A weighted iterative algorithm for neuromagnetic imaging

[DE92-040244] p 51 N93-13522

Extrathalamic modulation of cortical function

[AD-A255440] p 53 N93-14782

Cognition and the brain

[AD-A255483] p 59 N93-14788

Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator

[AD-A258012] p 119 N93-17817

A topographic investigation of brain electrical activity induced by motion sickness

[AD-A259024] p 124 N93-18952

Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle

p 127 N93-19708

Adaptive filters for monitoring localized brain activity from surface potential time series

[DE93-003795] p 217 N93-22774

Biomagnetic localization from transient quasi-static events

[DE93-007328] p 253 N93-25186

Automatic detection of seizures with applications

p 254 N93-25592

Physiological indices of mental workload

[AD-A261692] p 260 N93-26391

Duration of alpha suppression increases with angle in a mental rotation task

[AD-A261592] p 260 N93-26435

The AFOSR Workshop on the Future of EEG and MEG

[AD-A264338] p 335 N93-30160

#### ELECTROLYSIS

Oxygen generation by static feedwater electrolysis for Space Station Freedom

[SAE PAPER 921151] p 293 A93-41335

Recent regenerative ECLSS technology developments in Europe

[SAE PAPER 921332] p 304 A93-41493

Submarine Advanced Integrated Life Support system (SAILS) program

[AD-A253564] p 32 N93-11812

Integrated oxygen recovery system

[NASA-CR-192982] p 267 N93-26088

SPE water electrolyzers in support of the lunar outpost

p 315 N93-27977

#### ELECTROLYTE METABOLISM

Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men

p 92 A93-20029

Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest

p 162 A93-28682

Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man

p 163 A93-28685

Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission

p 247 A93-35207

Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects

p 281 A93-41125

Does drinking protect against mountain sickness?

p 382 A93-49565

Nocturnal pituitary hormone and renin profiles during chronic heat exposure

p 387 A93-52619

Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise

[NASA-TM-103942] p 255 N93-26133

#### ELECTROLYTES

SPE water electrolyzers in support of the lunar outpost

p 315 N93-27977

Transcutaneous analyte measuring methods

[AD-A262861] p 333 N93-29509

#### ELECTROLYTIC CELLS

A low pressure electrolyzer for the next generation submarine

[SAE PAPER 921125] p 291 A93-41316

Submarine Advanced Integrated Life Support system (SAILS) program

[AD-A253564] p 32 N93-11812

#### ELECTROMAGNETIC COMPATIBILITY

Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s

[AD-A255691] p 52 N93-14103

#### ELECTROMAGNETIC FIELDS

Development of K.E. Tsiolkovsky's ideas on the interaction between space, nature, and man

p 90 A93-18408

Accumulation of calcium ions in the myocardial sarcoplasmic reticulum of restrained rats exposed to a pulsed electromagnetic field

p 240 A93-35225

Mechanisms of microwave induced damage in biologic materials

[AD-A255799] p 42 N93-14648

Gene transcription and electromagnetic fields

[DE93-010854] p 276 N93-28848

Mechanisms of microwave induced damage in biologic materials

[AD-A264415] p 358 N93-32035

#### ELECTROMAGNETIC INTERFERENCE

Subtraction of 50 Hz interference from electrocardiogram by using cycle averaging method

p 11 A93-13714

Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s

[AD-A255691] p 52 N93-14103

#### ELECTROMAGNETIC PULSES

Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz

[AD-A258136] p 120 N93-17985

#### ELECTROMAGNETIC RADIATION

Joint HVAC transmission EMF environmental study

[DE92-017863] p 43 N93-15211

Potential human health effects associated with power frequency electric and magnetic fields

[PB93-132678] p 221 N93-24590

Gene transcription and electromagnetic fields

[DE93-010854] p 276 N93-28848

#### ELECTROMYOGRAPHY

Magnetic resonance imaging and electromyography as indexes of muscle function

p 44 A93-14975

Electromyographic activity while performing the anti-G straining maneuver during high sustained acceleration

p 47 A93-16155

Electromyographic investigations of tremor in aquanauts in simulated immersions

p 90 A93-18292

Intramuscular pressure and electromyography as indexes of force during isokinetic exercise

p 380 A93-49291

Sudden loading and fatigue effects on the human spine

[PB93-167526] p 286 N93-29199

#### ELECTRON BEAMS

Utilization of high energy electron beam in the treatment of drinking and waste water

[DE92-642335] p 372 N93-32406

#### ELECTRON MOBILITY

Wide-bandwidth high-resolution search for extraterrestrial intelligence

[NASA-CR-193137] p 322 N93-28895

#### ELECTRON OPTICS

Advances in miniature projection CRTs for helmet displays

p 229 A93-30066

#### ELECTRON TRANSFER

Primary charge separation in isolated photosystem 2 reaction centers

[DE92-041128] p 82 N93-17189

Measuring the metastatic potential of cancer cells

p 244 N93-25566

#### ELECTRONIC EQUIPMENT TESTS

Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)

[AD-A253394] p 30 N93-10288

Time stress measurement devices for enhancement of onboard bit performance

p 144 N93-19762

#### ELECTRONS

Radiation damage to DNA

[DE92-015760] p 5 N93-10834

#### ELECTRONYSTAGMOGRAPHY

Electronystagmography and audio potentials in space flight

p 9 A93-11675

#### ELECTROPHORESIS

Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water

[SAE PAPER 921268] p 300 A93-41438

Separation of rat pituitary secretory granules by continuous flow electrophoresis

p 329 A93-44933

The effects of prolonged growth in elevated CO2 concentrations in the field on the amounts of different leaf proteins

[DE93-002940] p 115 N93-19751

Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels

[DE93-007815] p 246 N93-26587

Electrophoretic separation of cells and particles from rat pituitary and rat spleen

[NASA-CR-193073] p 276 N93-28415

Comparative mutagenesis of human cells in vivo and in vitro

[DE93-012269] p 276 N93-28651

#### ELECTROPHYSIOLOGY

Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain

p 77 A93-18300

Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment

p 247 A93-35208

Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism

p 360 A93-46968

Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses

[AD-A254129] p 13 N93-10661

Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1

[AD-A254138] p 25 N93-10662

Effective neurons and attractor neural networks in cortical environment

[PREPRINT-829] p 82 N93-17214

Physiological indices of mental workload

[AD-A261692] p 260 N93-26391

## SUBJECT INDEX

The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness  
[AD-A263033] p 283 N93-27923

An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination  
[AD-A264293] p 331 N93-30818

**ELEVATION**  
Visual perception of elevation  
[AD-A261394] p 259 N93-26307

**ELEVATORS (LIFTS)**  
Platform stair lift  
[NASA-CASE-MFS-28772-1] p 353 N93-29845

**EMBEDDING**  
Virtual interface applications for airborne weapons systems p 318 N93-28858

**EMBOLISMS**  
Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775  
High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709

**EMBRYOLOGY**  
Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy p 155 A93-28725  
Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745  
Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands p 156 A93-28746  
Altering the position of the first horizontal cleavage furrow of the amphibian (*Xenopus*) egg reduces embryonic survival p 272 A93-39717  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179

**EMBRYOS**  
Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro p 205 A93-33045  
The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242

**EMERGENCIES**  
Psychophysiological factors which impair the professional reliability of a pilot in emergency situations p 129 A93-23150  
Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712  
Psychophysiological principles of flight training for actions in nonroutine situations p 256 A93-35233  
Failure mode workload theory and planning p 349 A93-42848

**EMOTIONAL FACTORS**  
The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652  
The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241  
Changes in the brain blood flow and respiration during psychoemotional stress p 252 A93-36723  
Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress p 253 A93-36745  
Motion sickness susceptibility and behavior p 405 A93-55948  
Effectiveness of birthdate biorhythm theory on flight accidents p 127 N93-19710  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264

**EMPHYSEMA**  
Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318

**EMPLOYEE RELATIONS**  
Organizational politics, participation in decision-making, and job satisfaction  
[DOT/FAA/AM-92/17] p 257 N93-25203

**ENCEPHALITIS**  
Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304

**END EFFECTORS**  
In search of the human touch --- in design of robotic hands p 102 A93-19256  
Grasp synthesis for planar and solid objects p 184 A93-27034  
An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137  
Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues  
[AIAA PAPER 93-1156] p 230 A93-31031  
Development of a large space robot - A multi-segment approach. I p 261 A93-34012  
Skill compensation and dynamic coupling of macro/smart effector system p 411 A93-56260

Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981  
Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] p 70 N93-14870

**ENDOCRINE GLANDS**  
Joint HVAC transmission EMF environmental study  
[DE92-017863] p 43 N93-15211

**ENDOCRINE SYSTEMS**  
Beta-endorphin and arginine vasopressin following stressful sensory stimuli in man p 47 A93-16158  
Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035  
The state of the endocrine system of rats of different age under conditions of immobilization stress and biomass administration p 242 A93-35671  
Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619  
A review of models of the human temperature regulation system  
[AD-A258023] p 120 N93-17918  
Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates  
[DE93-007678] p 211 N93-24455

**ENDOCRINOLOGY**  
AFRRRI reports  
[AD-A254581] p 49 N93-12649  
Transcutaneous Analyte Measuring Methods (TAMM), phase 2  
[AD-A256327] p 54 N93-15192  
A review of models of the human temperature regulation system  
[AD-A258023] p 120 N93-17918  
An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine  
[AD-A265497] p 360 N93-31917

**ENDOTHELIUM**  
Effect of acute hypoxia exposures on plasma endothelin in rats p 199 A93-30442

**ENDOTOXINS**  
Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186

**ENDURANCE**  
A computer-based visual analog scale  
[AD-A258152] p 122 N93-18280  
Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training  
[AD-A261059] p 267 N93-26229

**ENERGETIC PARTICLES**  
Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

**ENERGY ABSORPTION**  
Specific absorption rate and radiofrequency current-to-ground in human models exposed to near-field irradiation p 360 A93-47098  
Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station  
[NASA-CR-192015] p 139 N93-17973

**ENERGY BUDGETS**  
Biomass productivity and sustainability of a bioregenerative life-support system  
[SAE PAPER 921359] p 307 A93-41518

**ENERGY CONSUMPTION**  
Nutritional assessment of United States tactical air command pilots p 367 N93-32242

**ENERGY REQUIREMENTS**  
Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243

**ENERGY TRANSFER**  
Linear tetrapyrroles (phycobilins) in a model prebiological system p 398 A93-53350

**ENGINEERING**  
Diversity in biological research  
[NSF-92-19] p 42 N93-13700

**ENGINEERS**  
A study of illness related lost time in transport aircraft crewmembers  
[AD-A258193] p 132 N93-18298

**ENTOMOLOGY**  
Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products  
[AD-A255224] p 51 N93-13941

**ENTRAINMENT**  
Neurophysiological analysis of circadian rhythm entrainment  
[AD-A264681] p 361 N93-32018

## ENVIRONMENTAL CONTROL

**ENTRAPMENT**  
Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment  
[NASA-TM-104767] p 234 N93-23129

**ENVIRONMENT EFFECTS**  
Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222  
The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO  
[DE92-019411] p 5 N93-11630

**ENVIRONMENT MANAGEMENT**  
Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502

**ENVIRONMENT MODELS**  
Katz model prediction of *Caenorhabditis elegans* mutagenesis on STS-42  
[NASA-TM-4383] p 50 N93-13023

**ENVIRONMENT POLLUTION**  
Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222  
Space life support technology applications to terrestrial environmental problems p 265 N93-25617

**ENVIRONMENT PROTECTION**  
Scaling issues for biodiversity protection  
[DE92-016689] p 6 N93-12315  
Monitoring human tissues for toxic substances  
[PB92-223239] p 173 N93-21498

**ENVIRONMENT SIMULATION**  
Model building, algorithm and simulation of the pressure control system of a cabin p 29 A93-13534  
Virtual environment display for a 3D audio room simulation p 408 A93-53125  
The relationship between environmental conditions and UH-60 cockpit temperature  
[AD-A255918] p 69 N93-14090

**ENVIRONMENT SIMULATORS**  
Development of a tactile perceived attitude transducer  
[AD-A253724] p 25 N93-11081

**ENVIRONMENTAL CONTROL**  
Experimental research of the temperature and humidity control system for manned spacecraft cabin p 10 A93-13529  
Model building, algorithm and simulation of the pressure control system of a cabin p 29 A93-13534  
The dynamic mathematical model and digital simulation of the environmental control system p 61 A93-14319  
Dynamic multiobjective decision and its application in environmental control and life support system p 230 A93-30439  
Influence of space-flight factors on growth of spirulina p 199 A93-30441  
Space Station Water Processor - Current flight design  
[SAE PAPER 921112] p 289 A93-41306  
Overview of NASA's 1991 Life Support Systems Analysis Workshop  
[SAE PAPER 921118] p 290 A93-41310  
The development of an atmosphere composition monitor for the Environmental Control and Life Support System  
[SAE PAPER 921149] p 292 A93-41333  
Oxygen generation by static feedwater electrolysis for Space Station Freedom  
[SAE PAPER 921151] p 293 A93-41335  
The Centrifuge Facility Life Sciences Glovebox configuration study  
[SAE PAPER 921158] p 293 A93-41341  
Zero gravity phase separator technologies - Past, present and future  
[SAE PAPER 921160] p 293 A93-41342  
Conceptual design of ECLSS microgravity test beds  
[SAE PAPER 921164] p 294 A93-41346  
Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF)  
[SAE PAPER 921186] p 294 A93-41365  
A trade study method for determining the design parameter of CELSS subsystems  
[SAE PAPER 921198] p 295 A93-41374  
A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization  
[SAE PAPER 921210] p 295 A93-41386  
Dew point analysis for Space Station Freedom  
[SAE PAPER 921227] p 296 A93-41401  
Comparative test data assessment and simplified math modelling for Sabatier CO<sub>2</sub> reduction subsystem  
[SAE PAPER 921228] p 296 A93-41402

- The effects of a reduced pressure scenario on the Columbus APM environmental control system  
[SAE PAPER 921247] p 298 A93-41418
- System integration and verification approach for the environmental control system of the Columbus Attached Pressurized Module  
[SAE PAPER 921261] p 299 A93-41431
- The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test  
[SAE PAPER 921269] p 300 A93-41439
- Environmental control of the Mini Pressurized Logistic Module  
[SAE PAPER 921281] p 302 A93-41449
- Recent regenerative ECLSS technology developments in Europe  
[SAE PAPER 921332] p 304 A93-41493
- Life Support and Habitability Manual ESA PSS-03-406  
[SAE PAPER 921338] p 305 A93-41497
- Shuttle Orbiter Environmental Control and Life Support System - Flight experience  
[SAE PAPER 921348] p 305 A93-41507
- Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey  
[SAE PAPER 921350] p 306 A93-41509
- The General Purpose Work Station, a spacious microgravity workbench  
[SAE PAPER 921394] p 309 A93-41552
- Space Station and lunar/Mars life support research  
p 346 A93-42122
- A systems approach to water recycling research  
p 347 A93-42149
- Space habitat environmental health - A systems issue  
p 347 A93-42151
- Minitron II system for precise control of the plant growth environment  
p 357 A93-46470
- The Minitron system for growth of small plants under controlled environment conditions  
p 358 A93-46471
- The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions  
p 394 A93-52410
- Life support systems  
[AAS PAPER 91-320] p 409 A93-54308
- Distributed environmental control  
p 32 N93-11924
- ECLSS evolution: Advanced instrumentation interface requirements. Volume 3: Appendix C  
[NASA-CR-184367] p 64 N93-12990
- The environmental control and life support system for a lunar base: What drives its design  
p 66 N93-13991
- Life systems for a lunar base  
p 66 N93-13992
- Automation of closed environments in space for human comfort and safety  
[NASA-CR-192045] p 138 N93-17971
- Space Station ECLSS integration analysis  
[NASA-CR-192470] p 195 N93-22002
- Closed Ecological Life Support Systems (CELSS) Test Facility  
p 233 N93-22628
- Zero-G life support for Space Station Freedom  
p 233 N93-22640
- Advanced life support study. Modification 10: ECLSS logistical support analysis for Space Station Freedom  
[NASA-CR-192481] p 266 N93-25888
- Environmental control and life support system  
p 311 N93-27718
- Environmental control and life support system evolution  
p 311 N93-27719
- Technologies for ECLSS evolution  
p 311 N93-27720
- The ECLSS advanced automation project evolution and technology assessment  
p 312 N93-27723
- Marshall Space Flight Center ECLSS technology activities  
p 312 N93-27724
- JSC ECLSS R/T program overview  
p 312 N93-27725
- Environmental control and life support systems  
p 314 N93-27858
- Assessment of the state of the art in life support environmental control for SEI  
p 315 N93-27978
- Dust protection for environmental control and life support systems in the lunar environment  
p 315 N93-27979
- Manned lunar surface site  
p 316 N93-28033
- Automation of closed environments in space for human comfort and safety  
p 352 N93-29734
- Atmospheric control systems  
p 365 N93-31456
- Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols  
[NASA-CR-192570] p 359 N93-32354
- Microbiological and corrosion analysis of three urine pretreatment regimes with titanium 6A1-4V  
[NASA-CR-192575] p 372 N93-32356
- ENVIRONMENTAL MONITORING**
- Environmental monitoring and research at the John F. Kennedy Space Center  
p 154 A93-28714
- Space Station Freedom Environmental Health Care Program  
[SAE PAPER 921138] p 292 A93-41325
- Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight  
[SAE PAPER 921232] p 297 A93-41406
- Instrumentation for microbial monitoring of decontamination or biocide system effectiveness  
[SAE PAPER 921233] p 297 A93-41407
- Crew Health Care Systems installations for Space Station Freedom  
[SAE PAPER 921249] p 298 A93-41420
- Continuous monitoring of effluent iodine levels of Space Station water using solid state technology  
[SAE PAPER 921265] p 299 A93-41435
- Measurement of free and dissolved gas content of water samples on Space Station Freedom  
[SAE PAPER 921267] p 300 A93-41437
- First entry operations for spacecraft  
[SAE PAPER 921384] p 308 A93-41542
- Technology development for lunar base water recycling  
p 67 N93-13999
- Time stress measurement devices for enhancement of onboard bit performance  
p 144 N93-19762
- Crew health  
p 217 N93-22630
- ENVIRONMENTAL QUALITY**
- Kennedy Space Center environmental health program  
p 166 A93-28713
- Microbiology operations and facilities aboard restructured Space Station Freedom  
[SAE PAPER 921213] p 296 A93-41389
- ENVIRONMENTAL TESTS**
- Methods for test and evaluation of night vision goggle integrated helmets  
p 188 A93-27182
- ENZYME ACTIVITY**
- Selection of a ribozyme that functions as a superior template in a self-copying reaction  
p 111 A93-22053
- Effects of cold injury on serum angiotensin converting enzyme activities in rats  
p 199 A93-30444
- Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*)  
p 329 A93-44941
- Ozone - A new aspect of its effect on microorganisms  
p 398 A93-54971
- Mechanical stimulation of skeletal muscle increases prostaglandin F<sub>2</sub>(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism  
[NASA-CR-193041] p 282 N93-27102
- Comparative mutagenesis of human cells in vivo and in vitro  
[DE93-012269] p 276 N93-28651
- ENZYMES**
- Selection of a ribozyme that functions as a superior template in a self-copying reaction  
p 111 A93-22053
- Effect of acute hypoxia exposures on plasma endothelin in rats  
p 199 A93-30442
- Purification and properties of an ATPase from *Sulfolobus solfataricus*  
p 201 A93-32115
- Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from *Halobacterium saccharovorum*  
p 201 A93-32116
- Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection  
p 397 A93-52878
- Ribozymes - A distinct class of metalloenzymes  
p 398 A93-54163
- DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote  
p 399 A93-55580
- Nitrogen control of chloroplast development and differentiation  
[DE92-017392] p 39 N93-12768
- Complement proteins and decompression sickness susceptibility  
[AD-A264448] p 50 N93-12905
- Biochemically active layers for selective material detection sensors  
[MBB-Z-0440-92-PUB] p 158 N93-20959
- Biotechnological production and use of pyruvic acid with special reference to coenzyme regeneration  
[VT-PUBS-77] p 209 N93-23369
- Kinetic studies of interfacial photocurrents in planarized chloroplasts  
[DE93-002344] p 211 N93-25104
- Measuring the metastatic potential of cancer cells  
p 244 N93-25566
- Cellular and tissue injury during nonfreezing cold injury and frostbite  
[AD-A260574] p 254 N93-25900
- Comparative mutagenesis of human cells in vivo and in vitro  
[DE93-012269] p 276 N93-28651
- Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals  
[DE93-006235] p 276 N93-28890
- Center of Excellence in Biotechnology (Research)  
[AD-A263598] p 330 N93-29915
- EOSINOPHILS**
- Allergic and nonallergic rhinitis in Greek pilots  
p 21 N93-11317
- EPIDEMIOLOGY**
- Occupational dermatitis in the aircraft industry - 35 years of progress  
p 215 A93-32776
- Hypertension and the probability of an incapacitating event over a defined period - Impact of treatment  
p 215 A93-32777
- Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study  
p 216 A93-32786
- On the biological effects of cosmic rays - Epidemiological studies  
p 239 A93-34858
- Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine  
[AGARD-CP-518] p 14 N93-11283
- Viral hepatitis in the US Air Force, 1980 - 1989  
p 15 N93-11287
- Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations  
p 15 N93-11288
- Vaccination against Hepatitis B: The Italian strategy  
p 15 N93-11289
- HIV infection in the nineties  
p 15 N93-11290
- AIDS/HIV in the US Military  
p 16 N93-11291
- HIV variability and perspectives of a vaccine  
p 16 N93-11294
- Communicable diseases: A major burden of morbidity and mortality  
p 18 N93-11300
- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination  
p 18 N93-11303
- Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine  
p 20 N93-11311
- In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automatized enzyme immunoassay method to dose specific IgE  
p 21 N93-11314
- Epidemiologic research in Antarctica  
p 81 N93-16800
- Mathematics and biology: The interface, challenges and opportunities  
[DE92-041207] p 82 N93-17359
- Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991  
p 133 N93-19679
- Health effects of low-frequency electric and magnetic fields  
[DE93-005675] p 127 N93-19838
- Potential human health effects associated with power frequency electric and magnetic fields  
[PB93-132678] p 221 N93-24590
- The prevalence of artificial lens implants in the civil airman population  
[DOT/FAA/AM-92/14] p 253 N93-25214
- The chronic effects of JP-8 jet fuel exposure on the lungs  
[AD-A264162] p 334 N93-30153
- Cardiovascular risk factors in an Italian Air Force population: Preliminary report  
p 362 N93-32252
- EPIDERMIS**
- Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells  
p 272 A93-39715
- Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells  
p 376 A93-49214
- EPILEPSY**
- Electroencephalogram epileptiform abnormalities in candidates for aircrew training  
p 170 A93-28757
- Automatic detection of seizures with applications  
p 254 N93-25592
- EPINEPHRINE**
- The adrenalin/noradrenalin and the alpha/beta adrenoceptor correlations in the myocardium and the adrenergic chronotropic and ionotropic reactions under extreme conditions and during adaptation  
p 1 A93-10125
- Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat  
p 203 A93-33028
- EPITHELIUM**
- Time course of functional repair of the alveolar epithelium after hyperoxic injury  
p 78 A93-20032
- Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium  
p 329 A93-44935
- Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro  
[DE92-013510] p 13 N93-10626
- Explosives search dogs  
p 159 N93-21933

## SUBJECT INDEX

### EPOXY MATRIX COMPOSITES

The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569

### EQUATIONS OF MOTION

Operator-assisted planning and execution of proximity operations subject to operational constraints p 194 N93-21436

Visualization techniques for analyzing control of human movement: Affine mappings between multi-dimensional spaces p 353 N93-30204

### EQUIPMENT SPECIFICATIONS

Distribution of human waste samples in relation to sizing waste processing in space p 68 N93-14001

Space Station Freedom biomedical monitoring and countermeasures: Biomedical facility hardware catalog [NASA-CR-193156] p 246 N93-26700

### EQUIPOTENTIALS

Possible biological significance of the curvature of equipotential surfaces of gravity-force tidal variations p 324 A93-43025

### ERGOMETERS

Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970

Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363

### ERROR ANALYSIS

Analyzing the path of responding in maze-solving and other tasks p 202 A93-32652

A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321

A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity [AD-A255926] p 52 N93-14109

Modeling human response errors in synthetic flight simulator domain p 141 N93-19464

### ERRORS

Errors in aviation maintenance - Taxonomy and control p 175 A93-27135

Identification of hazardous awareness states in monitoring environments [SAE PAPER 921136] p 287 A93-41324

Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104

Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 N93-25736

### ERYTHROCYTES

Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072

Autoretic formation in the peripheral blood of people with lengthy limitations of motor activity p 250 A93-35245

Age-related changes in hemoglobin and erythrocyte levels p 250 A93-35250

Freeze-dried human red blood cells [AD-A253295] p 14 N93-11193

Cellular and tissue injury during nonfreezing cold injury and frostbite [AD-A260574] p 254 N93-25900

### ESCALATORS

Platform stair lift [NASA-CASE-MFS-28772-1] p 353 N93-29845

### ESCAPE SYSTEMS

An epidemiological study in SAF's pilots ejections p 143 N93-19699

### ESTIMATES

Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 N93-23734

### ESTROGENS

Heterogeneity of rat pituitary prolactin cells - Relationships among location, hormone assay and estrous cycle stage p 358 A93-46606

### ETHICS

Ethical concerns in the practice of military aviation medicine p 89 A93-18045

The lunar community church: Contributions to lunar living and to evolution of ethical and spiritual thinking p 57 N93-14020

### ETHNIC FACTORS

Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277

### ETHYL ALCOHOL

The effect of low blood alcohol levels on pilot performance in a series of simulated approach and landing trials p 179 A93-27453

Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252

Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499

Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321

The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299

### ETIOLOGY

Cases from the aerospace medicine residents' teaching file: Case No.52 - A flyer with syncope (clinical conference) p 168 A93-28740

Vestibular problems in diving and in space p 169 A93-28747

Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750

Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775

Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785

Barotrauma in Boeing 737 cabin crew p 278 A93-39706

Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712

Statistical prediction of space motion sickness p 403 A93-55943

Motion sickness susceptibility and behavior p 405 A93-55948

The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312

In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automated enzyme immunoassay method to dose specific IgE p 21 N93-11314

Complement proteins and decompression sickness susceptibility [AD-A254448] p 50 N93-12905

Training, muscle fatigue and stress fractures [AD-A255277] p 54 N93-15006

### EUGLENA

Swimming behavior of the unicellular flagellate, Euglena gracilis, in simulated and real microgravity p 151 A93-26549

### EUKARYOTES

Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 N93-27989

Regulation of alternative CO<sub>2</sub> fixation pathways in prokaryotic and eucaryotic photosynthetic organisms [DE93-012109] p 276 N93-29181

### EUROPA

Europa: Prospects for an ocean and exobiological implications p 113 N93-18552

### EUROPEAN AIRBUS

C.R.M. training for the advanced flight deck p 24 A93-13410

### EUROPEAN SPACE AGENCY

The training of the new astronaut candidates at EAC p 129 A93-23693

European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed [SAE PAPER 921200] p 295 A93-41376

Life Support and Habitability Manual ESA PSS-03-406 [SAE PAPER 921338] p 305 A93-41497

Selection of astronauts for European space missions p 225 N93-24345

### EUSTACHIAN TUBES

Barotrauma in Boeing 737 cabin crew p 278 A93-39706

### EVALUATION

Recommendations for mental workload measurement in a test and evaluation environment p 394 A93-52504

KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 N93-10713

Evaluation and estimation of handling qualities via statistical modeling of pilot response data [AD-A255324] p 69 N93-14548

### EVAPORATION

Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792

### EVOLED RESPONSE (PSYCHOPHYSIOLOGY)

Psychophysiological study on the effects of co-existence of lines for detecting dot target p 405 A93-55330

The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPAP [AD-A254840] p 27 N93-12432

Spatio-temporal masking: Hyperacuity and local adaptation [AD-A257934] p 121 N93-18006

Comparative analytical study of evoked and event related potentials as correlates of cognitive processes [AD-A261388] p 261 N93-26446

An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 N93-30818

### EVOLUTION (DEVELOPMENT)

Comets and the origins and evolution of life; Proceedings of the Conference, Univ. of Wisconsin, Eau Claire, Sept. 30-Oct. 2, 1991 p 109 A93-17976

Revision of the Wind River faunas, early Eocene of central Wyoming. X - Bunophorus (Mammalia, Artiodactyla) p 203 A93-33026

Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848

Life in and from space p 237 N93-24373

### EXAMINATION

A modified method for investigating gastric secretion in aviation medical examination p 359 A93-45692

### EXCRETION

Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332

Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans p 381 A93-49293

### EXERCISE PHYSIOLOGY

The influence of prior exercise at anaerobic threshold on decompression sickness p 8 A93-10333

Influence of graded dehydration on hyperthermia and cardiovascular drift during exercise p 44 A93-14971

Effects of acute exercise on attenuated vagal baroreflex function during bed rest p 48 A93-16160

Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy p 78 A93-20033

Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035

Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity p 78 A93-20036

Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898

Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048

Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypertensive hypokinesia p 170 A93-28760

Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781

Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498

Intramuscular pressure and electromyography as indexes of force during isokinetic exercise p 380 A93-49291

Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and nonfit men p 385 A93-52304

Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALS) p 121 N93-18209

Two techniques for measuring locomotion impact forces during zero G [NASA-TP-3305] p 217 N93-23410

AFTERRISE: Deep body temperature following exercise [AD-A259887] p 218 N93-23984

Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training [AD-A261059] p 267 N93-26229

Beta-adrenergic blockade and lactate metabolism during exercise at high altitude [AD-A263544] p 334 N93-29820

Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge [AD-A264260] p 337 N93-30894

### EXOBIOLOGY

To the stars with the cytoskeleton? p 1 A93-11198

The current status and prospects in the study of cell physiology under microgravity p 38 A93-16001

Exobiology science objectives at a lunar base p 71 A93-17435

NASA plans and opportunities --- space flight activities throughout the 1990s p 79 A93-20652

Can the adult skeleton recover lost bone? p 93 A93-20656

- Caenorhabditis elegans - A model system for space biology studies p 80 A93-20665
- The life span of the biosphere revisited p 149 A93-21847
- Short-term microgravity to isolate graviperception in cells p 111 A93-21901
- The possibility of life on Mars during a water-rich past p 196 A93-27887
- Influence of space-flight factors on growth of spirulina p 199 A93-30441
- Single particle effects, Biostack, and risk evaluation - Studies on the radiation risk from Galactic cosmic rays p 202 A93-32243
- Water in the solar system and its role in exobiology; Proceedings of the European Geophysical Society General Assembly, 26th, Wiesbaden, Germany, Apr. 22-26, 1991 p 268 A93-36551
- Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558
- Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877
- Human exposure to galactic cosmic rays in space p 410 A93-54887
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 365) [NASA-SP-7011(365)] p 12 N93-10075
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 360) [NASA-SP-7011(360)] p 12 N93-10076
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 364) [NASA-SP-7011(364)] p 12 N93-10077
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366) [NASA-SP-7011(366)] p 12 N93-10079
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 367) [NASA-SP-7011(367)] p 12 N93-10080
- Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 N93-13327
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 368) [NASA-SP-7011(368)] p 53 N93-14603
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 369) [NASA-SP-7011(369)] p 53 N93-14731
- STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission [NASA-TM-108034] p 80 N93-15823
- NASA/NSF Antarctic Science Working Group p 81 N93-16802
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 370) [NASA-SP-7011(370)] p 121 N93-18108
- Exobiology in Solar System Exploration [NASA-SP-512] p 112 N93-18545
- Overview: Exobiology in solar system exploration p 112 N93-18546
- The solar system: Importance of research to the biological sciences p 113 N93-18547
- Europa: Prospects for an ocean and exobiological implications p 113 N93-18552
- Titan p 114 N93-18553
- Exobiology: The NASA program p 114 N93-18561
- Investigation of wheat coleoptile response to phototropic stimulations p 114 N93-18608
- Aerospace medicine and biology: A cumulative index to a continuing bibliography (supplement 371) [NASA-SP-7011(371)] p 172 N93-20889
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 372) [NASA-SP-7011(372)] p 172 N93-21044
- Space life sciences overview p 158 N93-21074
- Life sciences utilization of Space Station Freedom p 205 N93-22622
- Life sciences recruitment objectives p 205 N93-22623
- Gravitational Biology Facility on Space Station: Meeting the needs of space biology p 206 N93-22625
- Space Biology Initiative. Trade Studies, volume 1 [NASA-CR-190989] p 207 N93-23068
- Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069
- Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070
- Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071
- Space Biology Initiative. Trade Studies, volume 2 [NASA-CR-190990] p 208 N93-23079
- Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080
- Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081
- Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 N93-23082
- Life in and from space p 237 N93-24373
- Gravity and root morphogenesis p 210 N93-24403
- Development of Arabidopsis thaliana grown under microgravity conditions p 211 N93-24404
- Exobiology and terrestrial life p 237 N93-24405
- Digest of Russian Space Life Sciences, issue 33 [NASA-CR-3922(39)] p 244 N93-25195
- Space biology research development [NASA-CR-192830] p 244 N93-25242
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 373) [NASA-SP-7011(373)] p 256 N93-26945
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377) [NASA-SP-7011(377)] p 361 N93-31924
- EXOSKELETONS**
- Integration of advanced teleoperation technologies for control of space robots p 366 N93-32107
- EXPERIMENT DESIGN**
- Biomedical engineering and space p 103 A93-20015
- Study design for microgravity human physiology experiments p 118 A93-25208
- Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design [SAE PAPER 921356] p 307 A93-41515
- EXPERT SYSTEMS**
- Design of a display system for a human pilot's supervisory tasks p 27 A93-11201
- Human-computer cooperative problem solving in satellite ground control p 188 A93-27163
- A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267
- Agent-based pilot-vehicle interfaces - Concept and prototype p 262 A93-34986
- Task allocation and automation in design and operation of man-machine systems p 348 A93-42842
- Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503
- Intelligent fault management for the Space Station active thermal control system p 32 N93-11930
- Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis p 33 N93-11941
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 N93-17971
- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595
- Fuzzy neural network methodology applied to medical diagnosis p 334 N93-29546
- EXPIRATION**
- Experimental study of volatile metabolites of human body p 11 A93-13711
- Maximal lung ventilation and forced expiration rate under hyperbaria p 76 A93-18297
- Respiration curves as an index of pilot workload p 332 A93-45320
- EXPLOSIVES**
- The challenge of bioterrorism for screening persons carrying explosives p 159 N93-21931
- Explosives search dogs p 159 N93-21933
- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 N93-29471
- EXPOSURE**
- Dermal exposure assessment: Principles and applications [PB92-205665] p 12 N93-10438
- Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia [AD-A255120] p 34 N93-12291
- Analysis of retinal function following laser irradiation [AD-A255649] p 52 N93-14163
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- Improved inhalation technology for setting safe exposure levels for workplace chemicals p 174 N93-22164
- Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates p 207 N93-22913
- [DE93-007677]
- Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259
- Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations p 274 N93-27152
- [DOT/FAA/AM-93/7]
- Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 N93-29651
- The chronic effects of JP-8 jet fuel exposure on the lungs [AD-A264162] p 334 N93-30153
- An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 N93-30818
- Carbon monoxide exposure of subjects with documented cardiac arrhythmias [PB93-179943] p 337 N93-30890
- EXTINCTION**
- Geography of end-Cretaceous marine bivalve extinctions p 273 A93-41075
- EXTRACTION**
- The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident [AD-A254550] p 49 N93-12612
- Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 N93-19399
- EXTRASOLAR PLANETS**
- Habitable zones around main sequence stars p 197 A93-28376
- EXTRATERRESTRIAL ENVIRONMENTS**
- Europa: Prospects for an ocean and exobiological implications p 113 N93-18552
- EXTRATERRESTRIAL INTELLIGENCE**
- Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191807] p 110 N93-16709
- SETI in Europe p 237 N93-23908
- EXTRATERRESTRIAL LIFE**
- To the stars with the cytoskeleton? p 1 A93-11198
- Organic models of interstellar grains p 35 A93-11847
- The possibility of life on Mars during a water-rich past p 196 A93-27887
- Habitable zones around main sequence stars p 197 A93-28376
- Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377
- Liquid water and the origin of life p 268 A93-36552
- Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877
- Venus: A search for clues to early biological possibilities p 113 N93-18549
- Mars: A reassessment of its interest to biology p 113 N93-18550
- Europa: Prospects for an ocean and exobiological implications p 113 N93-18552
- SETI in Europe p 237 N93-23908
- Life in and from space p 237 N93-24373
- Exobiology and terrestrial life p 237 N93-24405
- Space biology research development [NASA-CR-192830] p 244 N93-25242
- EXTRATERRESTRIAL RADIATION**
- Space radiation health program plan [NASA-TM-108036] p 123 N93-18375
- Radiological assessment for Space Station Freedom [NASA-TM-104758] p 128 N93-20303
- Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259
- EXTRAVEHICULAR ACTIVITY**
- Human support for Mars exploration - Issues and approaches p 27 A93-12077
- For space suits - The multifunction pressure reducer-regulator of Intertechnique p 61 A93-15057
- Space telerobotic research and applications at Space Systems/Loral [AAS PAPER 91-046] p 62 A93-15588
- K.E. Tsolkovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409
- Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411
- Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037
- Neutral buoyancy simulation of space telerobotics operations p 185 A93-27038
- An overview of the dynamic predictive architecture for robotic assistants p 191 A93-29112

## SUBJECT INDEX

Person-like intelligent systems architectures for robotic shared control and automated operations  
p 191 A93-29113

An experiment in vision based autonomous grasping within a reduced gravity environment  
p 193 A93-29137

Robot free-flyers in space extravehicular activity  
p 193 A93-29141

Rationale for a hyperbaric treatment capability at a Lunar Station  
p 213 A93-30286

The effects of a reduced pressure scenario on the Columbus APM environmental control system  
[SAE PAPER 921247] p 298 A93-41418

A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging  
[SAE PAPER 921253] p 298 A93-41423

Development of a test protocol for evaluating EVA glove performance  
[SAE PAPER 921254] p 298 A93-41424

Power assist EVA glove development  
[SAE PAPER 921255] p 299 A93-41425

Development of the Hermes EVA Suit Glove  
[SAE PAPER 921256] p 299 A93-41426

Development of a regenerable metal oxide sheet matrix CO2 removal system  
[SAE PAPER 921298] p 302 A93-41463

Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing  
[SAE PAPER 921299] p 303 A93-41464

Metabolic responses to simulated extravehicular activity  
[SAE PAPER 921303] p 282 A93-41468

Performance evaluation of candidate space suit elements for the next generation orbital EMU  
[SAE PAPER 921344] p 305 A93-41503

Mitigation of dust contamination during EVA operations on the moon and Mars  
p 345 A93-42107

EVA operational guidelines and considerations for use during the Space Station Freedom design review process  
p 345 A93-42119

Pressure suit requirements for moon and Mars EVA's  
p 346 A93-42123

Suited for spacewalking: A teacher's guide with activities  
[NASA-EP-279] p 65 A93-13692

A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population  
[NASA-TP-3286] p 96 A93-16619

Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station  
[NASA-CR-192015] p 139 A93-17973

Mission and Safety Critical (MASC): An EVACS simulation with nested transactions  
[NASA-CR-192295] p 149 A93-20314

TALON and CRADLE: Systems for the rescue of tumbling spacecraft and astronauts  
p 196 A93-22268

Investigation of the effects of Extra Vehicular Activity (EVA) and Launch and Entry (LES) gloves on performance  
p 266 A93-26061

The role of pyridoxine as a countermeasure for in-flight loss of lean body mass  
p 255 A93-26068

Extravehicular activity system  
p 312 A93-27787

EVA/manned systems  
p 312 A93-27789

Evolving EVA system capability for the evolving Space Station Freedom requirements  
p 312 A93-27791

EVA and telerobot interaction  
p 312 A93-27792

Extravehicular activity technology discipline  
p 314 A93-27859

A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever  
[NASA-CR-193301] p 365 A93-31844

### EXTRAVEHICULAR MOBILITY UNITS

Performance evaluation of candidate space suit elements for the next generation orbital EMU  
[SAE PAPER 921344] p 305 A93-41503

ASDA - Advanced Suit Design Analyzer computer program  
[SAE PAPER 921381] p 308 A93-41539

Pressure suit requirements for moon and Mars EVA's  
p 346 A93-42123

Evolution of Space Station EMU PLSS technology recommendations  
p 312 A93-27790

Evolving EVA system capability for the evolving Space Station Freedom requirements  
p 312 A93-27791

Simplified Aid For Crew Rescue (SAFFR)  
p 313 A93-27793

Extravehicular activity technology discipline  
p 314 A93-27859

### EXTREMELY LOW FREQUENCIES

The effects of exposure to 50 mT ELF magnetic fields for 96 h on rabbit EEG  
p 4 A93-13712

Gene transcription and electromagnetic fields  
[DE93-010854] p 276 A93-28848

## EYE (ANATOMY)

Colour is what the eye sees best  
p 159 A93-26245

Melanin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate  
p 214 A93-32120

Human low vision image warping - Channel matching considerations  
p 231 A93-32444

Analysis of factors influencing contrast vision in normal eyes  
p 332 A93-44848

Eye movements and visual information processing  
[AD-A250198] p 24 A93-10278

The prevalence of artificial lens implants in the civil airman population  
[DOT/FAA/AM-92/14] p 253 A93-25214

A fiber optic probe for the detection of cataracts  
p 254 A93-25593

Visual perception of elevation  
[AD-A261394] p 259 A93-26307

Discomfort glare from high-intensity discharge headlamps: Effects of context and experience  
[PB93-174720] p 336 A93-30659

## EYE DISEASES

The development of a visual color checkerboard stimulator  
p 30 A93-13723

Design of a reading test for low vision image warping  
p 400 A93-53025

## EYE DOMINANCE

The effects of superimposing symbology on a simulated night vision goggle display  
[AD-A263458] p 354 A93-30590

## EYE MOVEMENTS

The perception of heading during eye movements  
p 99 A93-20692

Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural  
p 203 A93-32773

Response characteristics of the human torsional vestibuloocular reflex  
p 215 A93-32774

Visual search in virtual environments  
p 233 A93-33450

Dynamic analysis of ocular torsion in parabolic flight using video-oculography  
p 386 A93-52405

Spectral motion produces an auditory after-effect  
p 405 A93-55579

Eye movements and visual information processing  
[AD-A250198] p 24 A93-10278

Visual psychophysics of egomotion  
[AD-A248349] p 26 A93-11488

Ocular attention-sensing interface system  
[NASA-CR-190884] p 65 A93-13450

Enhanced performance using physiological feedback  
[AD-A258006] p 130 A93-17816

Role of orientation reference selection in motion sickness  
[NASA-CR-191912] p 124 A93-18596

Eye movements and visual information processing  
[AD-A259955] p 225 A93-24297

Eye-head-arm coordination and spinal reflexes in weightlessness  
p 236 A93-24362

Optovet: An AustroMir-1991 experiment. Orientation effects from optokinetic stimulation  
p 226 A93-24366

Visual perception of elevation  
[AD-A261394] p 259 A93-26307

Coordinated action in 3-D space  
[AD-A261418] p 261 A93-26449

NASA supporting studies for microgravity research on eye movements  
[NASA-CR-193233] p 285 A93-29041

Head mounted displays for virtual reality  
[AD-A263498] p 322 A93-29340

A tutorial on exit pupils and eye rotation with virtual image optical displays  
[AD-A262399] p 333 A93-29400

A simple computational model of center-surround receptive fields in the retina  
[AD-A264723] p 336 A93-30515

An algorithm for simple and complex feature detection: From retina to primary visual cortex  
[AD-A264306] p 337 A93-30897

## EYE PROTECTION

Designing the right visor  
p 181 A93-26885

Effects of laser glare on visual search performance  
p 180 A93-28158

Multi-function visor  
p 146 A93-19770

## F

### F STARS

Habitable zones around main sequence stars  
p 197 A93-28376

### F-16 AIRCRAFT

Flight director information and pilot performance in instrument approaches  
[AD-A258186] p 131 A93-17857

## FATIGUE (BIOLOGY)

Attitude awareness enhancements for the F-16 head-up display  
[AD-A260280] p 236 A93-24168

Head-steered sensor flight test results and implications  
p 318 A93-28859

### F-18 AIRCRAFT

Predictive nosepointing and flightpath displays for air-to-air combat  
p 229 A93-30071

### FABRICATION

Electrically modifiable nonvolatile SONOS synapses for electronic neural networks  
[AD-A258318] p 122 A93-18252

Investigation into the common mode rejection ratio of the physiological signal conditioner circuit  
p 245 A93-26073

### FABRICS

Correlation of results of radiant heat test and convective heat test for three layered protective clothing  
p 194 A93-21161

EVA Glove Research Team  
[NASA-CR-193014] p 313 A93-27847

Power assist EVA glove development  
p 314 A93-27850

### FACE (ANATOMY)

Methods for characterizing the human head for the design of helmets  
[AD-A263875] p 353 A93-29889

### FACTOR ANALYSIS

Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions  
[AD-A252820] p 26 A93-11779

Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA  
[DE93-001923] p 321 A93-28942

The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability  
p 344 A93-31237

### FAILURE ANALYSIS

Response to automated function failure cue - An operational measure of complacency  
p 176 A93-27147

Shape optimization of tibial prosthesis components  
[NASA-CR-191123] p 246 A93-27085

### FAILURE MODES

Errors in aviation maintenance - Taxonomy and control  
p 175 A93-27135

Failure mode workload theory and planning  
p 349 A93-42848

### FALSE ALARMS

False cue detection thresholds in flight simulation  
[AIAA PAPER 93-3578] p 407 A93-52674

### FARM CROPS

Resource capture by single leaves  
[DE92-015847] p 5 A93-10461

Techniques for optimal crop selection in a controlled ecological life support system  
[NASA-TM-103950] p 33 A93-12018

Chemical characterization of some aqueous leachates from crop residues in 'CELSS'  
p 115 A93-19399

A proposal to demonstrate production of salad crops in the Space Station Mockup Facility with particular attention to space, energy, and labor constraints  
[NASA-CR-192815] p 209 A93-23169

Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model  
p 245 A93-26069

Continued results of the seeds in space experiment  
p 330 A93-29703

### FASTENERS

The design of mechanically compatible fasteners for human mandible reconstruction  
p 253 A93-25569

### FATIGUE (BIOLOGY)

Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion  
p 115 A93-21685

Some biochemical and functional characteristics of body state during multihour operator activity under extreme conditions  
p 161 A93-27686

Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining  
p 242 A93-35498

Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots  
p 401 A93-55163

Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine  
p 402 A93-55332

Effects of dextromethamphetamine on subjective fatigue  
[AD-A258252] p 119 A93-17822

Simulated sustained flight operations and performance. Part 1: Effects of fatigue  
[AD-A261012] p 266 A93-25859

Subjective mood and fatigue of C-141 crew during Desert Storm  
p 370 A93-32264



## FATIGUE (MATERIALS)

Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268

### FATIGUE (MATERIALS)

Training, muscle fatigue and stress fractures [AD-A255277] p 54 N93-15006

### FATTY ACIDS

The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 37 N93-14121

The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 153 N93-28691

### FEASIBILITY ANALYSIS

A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging [SAE PAPER 921253] p 298 N93-41423

Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1 [AD-A254138] p 25 N93-10662

KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 N93-10713

Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081

A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848

### FECEs

Distribution of human waste samples in relation to sizing waste processing in space p 68 N93-14001

### FEEDBACK

Enhanced performance using physiological feedback [AD-A258006] p 130 N93-17816

Coordinated action in 3-D space [AD-A261418] p 261 N93-26449

Integration of advanced teleoperation technologies for control of space robots p 366 N93-32107

### FEEDBACK CONTROL

Incorporating display limitations in a model-based analysis of flight simulator fidelity [AIAA PAPER 93-0859] p 137 N93-24923

On the control of a class of flexible manipulators using feedback linearization approach p 231 N93-31533

An update on the readiness of vapor compression distillation for spacecraft wastewater processing [SAE PAPER 921114] p 290 N93-41307

The effects of field of view size on the control of roll motion p 349 N93-43722

Autogenic-feedback training - A treatment for motion and space sickness p 404 N93-55946

Coordinated action in 3-D space [AD-A249830] p 31 N93-10994

Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier p 65 N93-13486

### FEET (ANATOMY)

Anthropometry of the foot and lower leg of U.S. Army soldiers: Fort Jackson, SC [AD-A261405] p 268 N93-26404

### FEEMALES

The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704

Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females [NASA-TP-3298] p 128 N93-20318

Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988 [AD-A260869] p 265 N93-25628

An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine [AD-A265497] p 360 N93-31917

### FEMUR

Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats p 77 N93-19994

Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat p 327 N93-44844

Optimal design of composite hip implants using NASA technology p 174 N93-22188

### FERTILIZATION

A microfermentation test for the rapid identification of yeasts p 156 N93-28733

### FERRIC IONS

Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 N93-32784

### FERTILITY

Melatonin in human preovulatory follicular fluid p 215 N93-32474

### FERTILIZATION

Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 N93-49179

### FERTILIZERS

Development of the nitrogen fixation system for CELSS [SAE PAPER 921238] p 297 N93-41411

Active synthetic soil [NASA-CASE-MSC-21954-1-NP] p 114 N93-19054

### FETUSES

Organization of the human circadian system [AD-A264675] p 361 N93-32015

### FEVER

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 N93-11306

### FIBER COMPOSITES

Optimal design of composite hip implants using NASA technology p 174 N93-22188

Finite element analysis of a composite artificial ankle p 174 N93-22189

### FIBER OPTICS

Simulator sickness experience in simulators equipped with fiber optic helmet mounted display systems [AIAA PAPER 92-4135] p 136 N93-24490

Helmet-mounted systems technology planning for the future p 227 N93-30052

A fiber optic probe for the detection of cataracts p 254 N93-25593

### FIBROSIS

Retroperitoneal fibrosis as a cause of hypertension in an aviator - A case report p 212 N93-30284

### FIELD OF VIEW

Visual scene effects on the somatogravic illusion p 88 N93-18035

Designing the right visor p 181 N93-26885

Helmet-mounted area of interest p 228 N93-30060

Low-cost color LCD helmet display p 228 N93-30062

Visual illusions and other effects with night vision devices p 230 N93-30072

Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 N93-33443

The effect of geometric field of view and tunnel design for perspective flight-path displays [SAE PAPER 921131] p 291 N93-41319

The effects of field of view size on the control of roll motion p 349 N93-43722

In-simulator assessment of trade-offs arising from mixture of color cuing and monocular, binocular, and stereopsis cuing information p 407 N93-52916

In-flight field-of-view with ANVIS [AD-A259905] p 235 N93-23992

Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 N93-25736

Interpupillary and vertex distance effects on field-of-view and acuity with ANVIS [AD-A261259] p 268 N93-26265

Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight [AD-A264661] p 341 N93-30542

### FIGHTER AIRCRAFT

Training analysis for the European Fighter Aircraft - 'A voyage into the unknown' p 98 N93-18769

The advent of helmet-mounted devices in the combat aircraft cockpit - An operator's viewpoint p 227 N93-30056

A cognitive classification of pilot performance in air combat p 347 N93-42814

Flight leads and crisis decision-making p 404 N93-55161

The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork [AD-A256192] p 69 N93-14520

Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 N93-19759

Flight above a virtual world p 145 N93-19766

Management of avionics data in the cockpit p 147 N93-19777

The integration of advanced cockpit and systems design p 147 N93-19779

Physiological indices of mental workload [AD-A261692] p 260 N93-26391

Specification of adaptive aiding systems [AD-A263071] p 314 N93-27927

Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857

The physiological limitations of man in the high G environment p 319 N93-28861

Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 N93-28870

The application of filtration technology within the Water Processor on board Space Station Freedom [SAE PAPER 921270] p 300 N93-41440

Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress p 401 N93-55165

Evaluation and optimization of a flexible filtration system for respiratory protection system 21 [AD-A262467] p 284 N93-28758

### FINGERS

Evaluation of finger motor reaction in flyer when handling throttle and stick p 29 N93-13539

Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 N93-49180

Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment [NASA-TM-104767] p 234 N93-23129

A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848

Power assist EVA glove development p 314 N93-27850

Prevention of cumulative trauma disorders [PB93-188332] p 338 N93-31138

Optimal design of composite hip implants using NASA technology p 174 N93-22188

Finite element analysis of a composite artificial ankle p 174 N93-22189

The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569

Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085

Increased fire and toxic contaminant detection responsibility by use of distributed, aspirating sensors p 311 N93-27722

Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853

Head-steered sensor flight test results and implications p 318 N93-28859

The acute inhalation toxicity of pyrolysis products of halon 1301 [AD-A260874] p 254 N93-25629

Fires on board aircraft: Toxicological risk in flight p 126 N93-19694

USAF/USN fixed wing night vision - The mission p 227 N93-30055

Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 N93-17697

Swimming behavior of the unicellular flagellate, *Euglena gracilis*, in simulated and real microgravity p 151 N93-26549

Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161

Involuntary attentional capture by abrupt onsets p 97 N93-17974

Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights [AD-A264626] p 341 N93-30426

Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 N93-31517

On the control of a class of flexible manipulators using feedback linearization approach p 231 N93-31533

Flight-path estimation in passive low-altitude flight by visual cues p 223 N93-32004

Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 N93-11279

The relationship between computer scoring and safety-pilot grading of flight performance [AD-A256245] p 58 N93-14600

Suction-cup shoes for astronauts - A new method of foot restraint p 62 N93-17072

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

Flight helmet weight, +Gz forces, and neck muscle strain p 136 N93-24046

## SUBJECT INDEX

- Goggles emergency release apparatus  
[AD-DO15685] p 351 N93-29607
- CATS EYES adjustment procedures  
[AD-A264069] p 353 N93-29924
- FLIGHT CONTROL**
- The USAF Test Pilot School flight control systems curriculum  
[AIAA PAPER 92-4067] p 24 A93-11253
- Evaluation of the efficiency of the pilot's control activity in a flight simulator p 100 A93-18347
- Active control versus passive observation in a simulated flight task p 179 A93-27196
- Estimation of the number of operators and their efficiency in flight vehicle control p 193 A93-29696
- Compatibility and consistency in display-control systems - Implications for aircraft decision aid design p 230 A93-30454
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 N93-28850
- Virtual interface applications for airborne weapons systems p 318 N93-28858
- Head-steered sensor flight test results and implications p 318 N93-28859
- Overview of cockpit technology research and development programs for improvement of the man/machine interface: Review of the AGARD AVP Symposium held in Madrid, May 1992 p 320 N93-28872
- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 N93-29888
- Handedness and motor programming effects of manual control and movement [AD-A264022] p 340 N93-30027
- FLIGHT CREWS**
- Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330
- Documentation of activity and rest of a U.S. National Guard attack helicopter battalion p 9 A93-10338
- C.R.M. training for the advanced flight deck p 24 A93-13410
- Crew factors --- and their psychological problems in long term space flight p 57 A93-17431
- K.E. Tsolkovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409
- The efficiency of a prophylactic-rehabilitational treatment of civil-aviation flight crews p 91 A93-18415
- Training analysis for the European Fighter Aircraft - 'A voyage into the unknown' p 98 A93-18769
- Individual differences in airline captains' personalities, communication strategies, and crew performance p 177 A93-27175
- Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188
- Electroencephalogram epileptiform abnormalities in candidates for aircrew training p 170 A93-28757
- Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762
- Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276
- Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277
- Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 A93-30283
- Neurobehavioral test in civil aviation flight personnel p 223 A93-30443
- On cockpit (crew) resource management p 223 A93-31490
- Information management problems and their influence on cockpit equipment architecture of transport aircraft p 223 A93-31491
- Radiation conditions onboard passenger aircraft p 249 A93-35230
- Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress p 253 A93-36745
- 'And we were tired' fatigue and aircrew errors p 264 A93-37070
- Human factors problems for aircrew-aircraft interfaces Where should we focus our efforts? p 264 A93-37300
- Barotrauma in Boeing 737 cabin crew p 278 A93-39706
- New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774
- Identification of hazardous awareness states in monitoring environments [SAE PAPER 921136] p 287 A93-41324
- Crew Health Care Systems installations for Space Station Freedom [SAE PAPER 921249] p 298 A93-41420

- A method for predicting the work load of a flight engineer engaged in counteracting failures of functional systems of a transport aircraft p 364 A93-45688
- Flight crew sleep during multiple layover polar flights p 380 A93-49226
- Coccidioidomycosis - A persistent threat to deployed populations p 380 A93-49228
- Ab initio pilot training process more efficient than traditional methods p 387 A93-49276
- Incidence of cardiac dysrhythmias occurring during centrifuge training p 384 A93-52297
- Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306
- Adaptation to nauseogenic motion stimuli and its application in the treatment of airsickness p 404 A93-55947
- Operator workload predictions for the revised AH-64A workload prediction model, volume 1 [AD-A254198] p 30 N93-10261
- KC-135 crew reduction feasibility demonstration simulation study, Volume 3: Test and evaluation [AD-A253931] p 30 N93-10713
- Relating flying hours to aircrew performance: Evidence for attack and transport missions [AD-A253988] p 25 N93-10719
- Asthma in aircrew: Assessment, treatment and disposition p 21 N93-11315
- An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 N93-12509
- Operator workload predictions for the revised AH-64A workload prediction model, Volume 2: Appendices A through H [AD-A254939] p 63 N93-12545
- Human factors research in aircrew performance and training: 1986-1991 [AD-A254455] p 63 N93-12609
- Thermal stress in US Air Force operations [AD-A255785] p 51 N93-14027
- The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork [AD-A256192] p 69 N93-14520
- Development of measures of crew coordination [AD-A255384] p 70 N93-14651
- Operational use of contact lenses by military aircrew [AGARD-AG-334] p 95 N93-15824
- Workshop on Aeronautical Decision Making (ADM), Volume 1: Executive summary [AD-A257016] p 99 N93-16189
- Effects of dextromethamphetamine on subjective fatigue [AD-A258252] p 119 N93-17822
- The detection of lateral motion by US Navy jet pilots [AD-A258115] p 120 N93-17896
- An analysis of a sustained flight operation training mission in Navy attack aircraft [AD-A258199] p 131 N93-18205
- A computer-based visual analog scale [AD-A258152] p 122 N93-18280
- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm [AD-A258146] p 122 N93-18292
- Using constraint satisfaction networks to study aircrew selection for advanced cockpits [AD-A258151] p 140 N93-18293
- The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm [AD-A258156] p 132 N93-18294
- A study of illness related lost time in transport aircraft crewmembers [AD-A258193] p 132 N93-18298
- Medical evaluation of spatial disorientation mishaps p 134 N93-19703
- Advanced Aircraft Interfaces: The Machine Side of the Man-Machine Interface [AGARD-CP-521] p 144 N93-19757
- Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 N93-19759
- Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 N93-20384
- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm [AD-A259243] p 171 N93-20580
- Evaluation of two microclimate cooling air vests on a heated mannequin [AD-A259410] p 194 N93-21269
- Simulated sustained flight operations and performance, Part 1: Effects of fatigue [AD-A261012] p 266 N93-25859

## FLIGHT INSTRUMENTS

- Predicting radiation induced performance decrements of AH-1 helicopter crews, Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements p 351 N93-29484
- [AD-A262872] p 351 N93-29484
- Field test of a computer-driven tool to measure psychological characteristics of aircrew [AD-A264484] p 341 N93-30425
- Helicopter simulation: An aircrew training and qualification perspective p 342 N93-30676
- Abridged procedural guide to aircrew anthropometric accommodation assessment [AD-A265220] p 366 N93-32006
- Application and validation of workload assessment techniques [AD-A264575] p 366 N93-32012
- Nutrition, Metabolic Disorders and Lifestyle of Aircrew [AGARD-CP-533] p 367 N93-32240
- Nutrition for a typical MAC crew during Desert Storm p 368 N93-32245
- Changes in food and energy intake in military aircrew p 368 N93-32246
- Lipodystrophies in the French military flight crew p 362 N93-32249
- Blood lipids in aircrew recruits and in RAF aviators p 362 N93-32251
- The effects of an anti-jet lag diet p 370 N93-32263
- Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264
- C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265
- Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268
- Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 N93-32269
- FLIGHT FATIGUE**
- Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762
- 'And we were tired' fatigue and aircrew errors p 264 A93-37070
- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm [AD-A259243] p 171 N93-20580
- C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265
- FLIGHT FITNESS**
- The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit p 10 A93-12969
- Prospective assessment of stereoscopic visual status and USAF pilot training attrition p 116 A93-24039
- Age and length of service of flight personnel in the case of chronic diseases p 248 A93-35227
- Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255
- Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499
- New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774
- Incidence of cardiac dysrhythmias occurring during centrifuge training p 384 A93-52297
- Risk assessment and clinical aeromedical decision-making p 385 A93-52305
- FLIGHT HAZARDS**
- Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975
- Safety concerns as a factor in pilot desire to change aircraft p 129 A93-24040
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857
- FLIGHT INSTRUMENTS**
- Human factors on advanced flight decks; Proceedings of the Conference, London, United Kingdom, Mar. 14, 1991 [ISBN 0-903409-85-2] p 29 A93-13408
- C.R.M. training for the advanced flight deck p 24 A93-13410
- Keeping the pilot in the loop p 29 A93-13413
- Up/down in (im)possible flight attitude indicators - Some effects of colour, shape and pattern p 185 A93-27128
- The effect of roll-stabilized sensor information on pilot performance p 175 A93-27130
- The development and use of a generic nonnormal checklist with applications in ab initio and Introductory Advanced Qualification Programs p 180 A93-27456
- Virtual landings --- developing Enhanced Vision Systems for VFR p 410 A93-54868
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857

## FLIGHT MANAGEMENT SYSTEMS

- The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 A93-19782
- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 A93-28855

### FLIGHT MANAGEMENT SYSTEMS

- Design of a display system for a human pilot's supervisory tasks p 27 A93-11201
- Airline training for advanced technology cockpits p 24 A93-13411
- Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416
- Pilot interaction with cockpit automation - Operational experiences with the Flight Management System p 189 A93-27455

### FLIGHT NURSES

- Living and working in space - Evolution of nursing in a new environment p 166 A93-28710
- The overview effect - The impact of space exploration on the evolution of nursing science p 155 A93-28722

### FLIGHT OPERATIONS

- An analysis of a sustained flight operation training mission in Navy attack aircraft [AD-A258199] p 131 A93-18205
- Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 A93-19683
- Simulated sustained flight operations and performance. Part 1: Effects of fatigue [AD-A261012] p 266 A93-25859

### FLIGHT PATHS

- The effects of head and sensor movement on flight profiles during simulated dive bombing p 185 A93-27131
- Predictive nosepointing and flightpath displays for air-to-air combat p 229 A93-30071
- Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004
- The effect of geometric field of view and tunnel design for perspective flight-path displays [SAE PAPER 921131] p 291 A93-41319
- Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 A93-28857

### FLIGHT PLANS

- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 A93-28855

### FLIGHT RECORDERS

- Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 A93-32268

### FLIGHT SAFETY

- Fractures of the vertebral column after ejection p 46 A93-15575
- K.E. Tsiolkovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409
- Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410
- An analytical study of the effects of age and experience on flight safety p 176 A93-27158
- Mishap trends and cause factors in naval aviation - A review of Naval Safety Center data, 1986-90 p 405 A93-55166
- Can injury scoring techniques provide additional information for crash investigators? p 125 A93-19663
- Occupant simulation as an aspect of flight safety research p 142 A93-19665
- Disorientation and flight safety: A survey of UK Army aircrew p 133 A93-19680
- Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 A93-19697
- Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 A93-19698
- Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 A93-19707
- Gremilins: A dozen hazardous thought and behavior patterns as risk factors p 134 A93-19709
- Human factors and the safety of flights: The importance of the management of sleep p 371 A93-32267

### FLIGHT SIMULATION

- Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions [AIAA PAPER 92-4233] p 28 A93-13331
- The physiological consequences of simulated helicopter flight in NBC protective equipment p 117 A93-24049
- The effects of head and sensor movement on flight profiles during simulated dive bombing p 185 A93-27131
- Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation --- Task Load Index p 175 A93-27139

### Testing a subjective metric of situation awareness

- p 178 A93-27183
- Spatial orientation and dynamics in virtual reality systems - Lessons from flight simulation p 178 A93-27185
- Multidimensional scaling analysis of terrain features relevant for simulating low-altitude flight p 188 A93-27186
- Active control versus passive observation in a simulated flight task p 179 A93-27196
- The effect of low blood alcohol levels on pilot performance in a series of simulated approach and landing trials p 179 A93-27453
- Rated performance, cardiovascular and quantitative EEG parameters during simulated instrument flight under the effect of terfenadine p 165 A93-28708
- The advent of helmet-mounted devices in the combat aircraft cockpit - An operator's viewpoint p 227 A93-30056
- Helmet Mounted Display symbology integration research p 263 A93-35914
- Performance consequences of automation-induced 'competency' p 286 A93-39571
- Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575
- A comparison of two scoring procedures with the NASA task load index in a simulated flight task p 349 A93-42849
- Acoustical and vibratory stimuli interdependencies and their applications in simulation and cue synchronization [AIAA PAPER 93-3562] p 406 A93-52662
- A comparative evaluation of three take-off performance monitor display types [AIAA PAPER 93-3608] p 406 A93-52669
- False cue detection thresholds in flight simulation [AIAA PAPER 93-3578] p 407 A93-52674
- Future military pilot training - A perspective of industry [AIAA PAPER 93-3601] p 404 A93-52689
- Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694
- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 A93-10713
- Perceptual dimensions of visual scenes relevant for simulating low-altitude flight [AD-A254645] p 57 A93-12662
- Evaluation and estimation of handling qualities via statistical modeling of pilot response data [AD-A255324] p 69 A93-14548
- The relationship between computer scoring and safety-pilot grading of flight performance [AD-A256245] p 58 A93-14600
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 A93-17857
- Modeling human response errors in synthetic flight simulator domain p 141 A93-19464
- Modeling the performance of the human (pilot) interaction in a synthetic flight domain: Information theoretic approach p 141 A93-19465
- Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 A93-19681
- Attitude awareness enhancements for the F-16 head-up display [AD-A260280] p 236 A93-24168
- Virtual interface applications for airborne weapons systems p 318 A93-28858
- Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 A93-28870
- Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements [AD-A262872] p 351 A93-29484
- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 A93-29888
- Helicopter simulation: An aircrew training and qualification perspective p 342 A93-30676
- Training effectiveness assessment: Where are we? p 342 A93-30679
- Current training: Where are we? p 342 A93-30680

### FLIGHT SIMULATORS

- The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172
- Transfer effects of scene content and crosswind in landing instruction p 62 A93-15665
- Pilot performance with blood alcohol concentrations below 0.04 percent p 46 A93-16151
- Evaluation of the efficiency of the pilot's control activity in a flight simulator p 100 A93-18347

### Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training

- p 98 A93-18773
- Advances in training technology and the role of the instructor p 98 A93-18775
- Incorporating display limitations in a model-based analysis of flight simulator fidelity [AIAA PAPER 93-0859] p 137 A93-24923
- Insights into pilot situation awareness using verbal protocol analysis p 175 A93-27138
- Helmet-mounted area of interest p 228 A93-30060
- Evaluation of conformal and body-axis attitude information for spatial awareness p 229 A93-30070
- Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575
- A study of decision making and performance in rejected takeoffs [SAE PAPER 921134] p 287 A93-41322
- Changes in the dark focus of accommodation associated with simulator sickness p 379 A93-49222
- Profile analysis of simulator sickness symptoms - Application to virtual environment systems p 381 A93-49399
- Motion sickness and oculomotor systems in virtual environments p 381 A93-49400
- Virtually induced motion sickness in virtual environments p 381 A93-49401
- Cybersickness - Perception of self-motion in virtual environments p 381 A93-49402
- Will simulation sickness slow down the diffusion of virtual environment technology? p 391 A93-49405
- A literature survey for virtual environments - Military flight simulator visual systems and simulator sickness p 387 A93-49406
- The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299
- Simulator sickness p 403 A93-55944
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 A93-17857
- Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 A93-19683
- Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 A93-23995
- International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection [DLR-FB-92-12] p 225 A93-24104
- A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 A93-24490
- Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 A93-24738
- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 A93-28855
- Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display [AD-A264401] p 353 A93-30167
- Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight [AD-A264661] p 341 A93-30542
- Training effectiveness assessment: Where are we? p 342 A93-30679
- Current training: Where are we? p 342 A93-30680
- Training effectiveness assessment: Methodological problems and issues p 342 A93-30684
- Application and validation of workload assessment techniques [AD-A264575] p 366 A93-32012

### FLIGHT STRESS

- Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173
- Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214
- The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555
- Back ache in helicopter pilots p 382 A93-49566

### FLIGHT STRESS (BIOLOGY)

- An assessment of Turkish Air Force pilots' anxiety and depression levels p 23 A93-10334
- Lower body negative pressure system for simulation of +Gz-induced physiological strain p 119 A93-25210
- Insights into pilot situation awareness using verbal protocol analysis p 175 A93-27138
- Flight physiology - Clinical considerations p 164 A93-28690

## SUBJECT INDEX

- Unconsciousness in flight and its prevention  
p 217 A93-32787
- Informative value of the respiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors  
p 248 A93-35222
- Structural and cytochemical signs of the development of deadaptation, as determined from blood characteristics  
p 252 A93-36724
- New aspects of using hyperbaric oxygenation in aviation medicine  
p 252 A93-36742
- Occupational health problems in aviation medicine  
p 252 A93-36743
- Subjective mood and fatigue of C-141 crew during Desert Storm  
p 370 A93-32264
- FLIGHT SURGEONS**  
Night vision manual for the flight surgeon  
[AD-A257059] p 104 A93-15710
- FLIGHT TESTS**  
Ground based simulation in test and evaluation education  
[AIAA PAPER 92-4066] p 24 A93-11252
- Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions  
[AIAA PAPER 92-4233] p 28 A93-13331
- Microgravity flight testing of a laboratory robot  
[AAS PAPER 91-035] p 62 A93-15583
- Visual cues in low-level flight - Implications for piloting, training, simulation, and enhanced/synthetic vision systems  
p 264 A93-35918
- Evaluation and estimation of handling qualities via statistical modeling of pilot response data  
[AD-A255324] p 69 A93-14548
- Flight above a virtual world  
p 145 A93-19766
- Head-steered sensor flight test results and implications  
p 318 A93-28859
- FLIGHT TIME**  
Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots  
p 91 A93-18416
- An analytical study of the effects of age and experience on flight safety  
p 176 A93-27158
- Relating flying hours to aircrew performance: Evidence for attack and transport missions  
[AD-A253988] p 25 A93-10719
- FLIGHT TRAINING**  
Success rate analysis of Navy SERGRAD Flight Training  
p 56 A93-16152
- Visual augmentation and scene detail effects in flight training  
p 180 A93-27454
- Psychophysiological principles of flight training for actions in nonroutine situations  
p 256 A93-35233
- Data bank establishment principles as applied to the problem of physiological norms in space medicine  
p 249 A93-35234
- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 A93-10713
- An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission  
[AD-A254984] p 35 A93-12509
- Human factors research in aircrew performance and training: 1986-1991  
[AD-A254455] p 63 A93-12609
- Development of measures of crew coordination  
[AD-A255384] p 70 A93-14651
- The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training  
[AD-A258025] p 131 A93-17919
- An analysis of a sustained flight operation training mission in Navy attack aircraft  
[AD-A258199] p 131 A93-18205
- The unique contribution of selected personality tests to the prediction of success in naval pilot training  
[AD-A258144] p 132 A93-18291
- The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)?  
p 143 A93-19704
- Mandatory multi-engined training syllabus  
[CAP-601] p 363 A93-31729
- FLIGHT VEHICLES**  
Evaluation of finger motor reaction in flyer when handling throttle and stick  
p 29 A93-13539
- Estimation of the number of operators and their efficiency in flight vehicle control  
p 193 A93-29696
- FLIR DETECTORS**  
The effects of head and sensor movement on flight profiles during simulated dive bombing  
p 185 A93-27131
- Visual illusions and other effects with night vision devices  
p 230 A93-30072
- Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays  
p 311 A93-27177
- The design and development of the new RAF standard HUD format  
p 318 A93-28856
- Head-steered sensor flight test results and implications  
p 318 A93-28859
- FLOW GEOMETRY**  
Perception/action: An holistic approach  
[AD-A259597] p 235 A93-24067
- FLUID FILTERS**  
Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols  
[NASA-CR-192570] p 359 A93-32354
- FLUID MANAGEMENT**  
Development of membrane gas removal technology for microgravity liquid flow systems  
[SAE PAPER 921162] p 294 A93-41344
- Two phase fluid management for hydroponics  
[SAE PAPER 921163] p 294 A93-41345
- FLUID PRESSURE**  
Transcapillary fluid responses to lower body negative pressure  
p 380 A93-49292
- FLUORESCENCE**  
Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation  
p 357 A93-46469
- New approaches to the measurement of chlorophyll, related pigments and productivity in the sea  
[NASA-CR-190879] p 42 A93-13612
- Biofilm ecology of bioluminescent bacteria  
[AD-A255282] p 42 A93-14532
- FLUOROCARBONS**  
Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301)  
p 277 A93-39704
- Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects  
p 278 A93-39705
- FLUOROHYDROCARBONS**  
The acute inhalation toxicity of pyrolysis products of halon 1301  
[AD-A260874] p 254 A93-25629
- FLUSHING**  
Variable-Volume Flushing (V-VF) device for water conservation in toilets  
p 195 A93-22167
- FLUX DENSITY**  
Development of K.E. Tsiolkovsky's ideas on the interaction between space, nature, and man  
p 90 A93-18408
- Stimulation of lettuce productivity by manipulation of diurnal temperature and light  
p 327 A93-44879
- FLYING PERSONNEL**  
The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit  
p 10 A93-12969
- The role of rheoencephalography in the practice of aviation medicine  
p 160 A93-27649
- Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal  
p 164 A93-28699
- Cases from the aerospace medicine residents' teaching file: Case No.52 - A flyer with syncope (clinical conference)  
p 168 A93-28740
- Age and length of service of flight personnel in the case of chronic diseases  
p 248 A93-35227
- Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel  
p 257 A93-36744
- Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel  
p 359 A93-45691
- Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine  
p 20 A93-11311
- The five-factor personality model and naval aviation candidates  
[AD-A260227] p 225 A93-24319
- The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness  
[AD-A263033] p 283 A93-27923
- Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces  
p 370 A93-32260
- FLYWHEELS**  
Development of a large space robot - A multi-segment approach. I  
[AIAA PAPER 93-1463] p 261 A93-34012
- FOAMS**  
Protective helmet assembly  
[NASA-CASE-MSC-21842-1] p 106 A93-17088
- FOCUSING**  
Changes in the dark focus of accommodation associated with simulator sickness  
p 379 A93-49222
- FOLDING STRUCTURES**  
Prefabricated foldable lunar base modular systems for habitats, offices, and laboratories  
p 106 A93-17444
- FOOD INTAKE**  
Protein absorption and energy digestibility at high altitude  
p 115 A93-21683
- Nutrition for a typical MAC crew during Desert Storm  
p 368 A93-32245
- Changes in food and energy intake in military aircrew  
p 368 A93-32246
- Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school  
p 368 A93-32248
- Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots  
p 369 A93-32258
- The effects of an antijet lag diet  
p 370 A93-32263
- FOOD PRODUCTION (IN SPACE)**  
Controlled Ecological Life Support System - CELSS  
p 62 A93-17432
- Bioregenerative life support as self-sustaining ecosystem in space  
p 231 A93-32073
- Biosphere 2 - Overview of system performance during the first nine months  
[SAE PAPER 921129] p 291 A93-41317
- Crop interactions in polyculture and their implications for CELSS design  
[SAE PAPER 921197] p 295 A93-41373
- OCAM - A CELSS modeling tool: Description and results --- Object-oriented Controlled Ecological Life Support System Analysis and Modeling  
[SAE PAPER 921241] p 298 A93-41413
- Stimulation of lettuce productivity by manipulation of diurnal temperature and light  
p 327 A93-44879
- CELSS nutrition system utilizing snails  
p 394 A93-52411
- Lunar base CELSS: A bioregenerative approach  
p 67 A93-13993
- Crop growth and associated life support for a lunar farm  
p 67 A93-13994
- FOREARM**  
Gravitoinertial force level affects the appreciation of limb position during muscle vibration  
p 169 A93-28744
- Prosthetic elbow joint  
[NASA-CASE-MFS-28707-1] p 354 A93-30566
- FORMALISM**  
Formal aspects of human-computer interaction  
p 66 A93-13909
- FORMAT**  
Display format and highlight validity effects on search performance using complex visual displays  
p 187 A93-27160
- Stimulus presentation formats and measurement techniques for the quantification of target detection performance  
[AD-A258933] p 133 A93-19449
- FOSSILS**  
Microfossils of the Early Archean Apex chert - New evidence of the antiquity of life  
p 272 A93-40308
- FOUR-WAVE MIXING**  
Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing  
[DE93-006411] p 210 A93-24028
- FOURIER ANALYSIS**  
Long-range anticorrelations and non-Gaussian behavior of the heartbeat  
p 161 A93-28049
- FOURIER TRANSFORMATION**  
Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-191618] p 110 A93-15825
- Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis  
[AD-A255582] p 95 A93-16041
- FOVEA**  
Analysis of retinal function following laser irradiation  
[AD-A255649] p 52 A93-14163
- FRACTURES (MATERIALS)**  
Training, muscle fatigue and stress fractures  
[AD-A255277] p 54 A93-15006
- FRACTURING**  
Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident?  
p 125 A93-19664
- FRAGMENTS**  
Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] p 276 A93-28952
- FREE FALL**  
A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite  
p 240 A93-35215
- Turning-over reaction during free fall in labyrinthectomized rats after a flight on the Cosmos 936 biosatellite  
p 241 A93-35246
- The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat  
p 143 A93-19671
- FREE RADICALS**  
Free radical attack - Biological test for human resistance capability  
p 39 A93-17434

## FREEZE DRYING

- Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101  
Investigation of laser-induced retinal damage [AD-A264096] p 338 A93-31094

### FREEZE DRYING

- Freeze-dried human red blood cells [AD-A253295] p 14 A93-11193  
Evaluation of dried storage of platelets for transfusion: Physiological integrity and hemostatic functionality [AD-A263240] p 334 A93-29620

### FREON

- Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers p 168 A93-28739  
Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704  
Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705

### FREQUENCY ANALYZERS

- A procedure for the frequency analysis of telerobotic tasks data p 392 A93-50513

### FREQUENCY MEASUREMENT

- Auditory perception [AD-A255061] p 23 A93-12469

### FREQUENCY MODULATION

- Auditory spectro-temporal pattern analysis [AD-A264691] p 361 A93-31981

### FREQUENCY SCANNING

- A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 A93-10321

### FROGS

- Studying the effects of microgravity on lower vertebrate development and behavior p 158 A93-21099  
Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 A93-22800  
Japanese treefrog experiment onboard the Space Station Mir p 210 A93-24402

### FROSTBITE

- Effects of cold injury on serum angiotensin converting enzyme activities in rats p 199 A93-30444  
Cellular and tissue injury during nonfreezing cold injury and frostbite [AD-A260574] p 254 A93-25900

### FROZEN FOODS

- Space Station Freedom food management [SAE PAPER 921248] p 298 A93-41419

### FULL SCALE TESTS

- Human factors evaluation of the HL-20 full-scale model p 409 A93-53746

### FUMES

- Potential health effects of fume particles on the crew of spacecrafts [SAE PAPER 921387] p 308 A93-41545

### FUNCTIONAL ANALYSIS

- Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H [AD-A254939] p 63 A93-12545

### FUNCTIONAL DESIGN SPECIFICATIONS

- Functions simulation model of integrated regenerable life support system [SAE PAPER 921201] p 295 A93-41377  
KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 A93-10713  
Space Biology Initiative. Trade Studies, volume 1 [NASA-CR-190989] p 207 A93-23068  
Space Biology Initiative. Trade Studies, volume 2 [NASA-CR-190990] p 208 A93-23079  
Extravehicular activity system p 312 A93-27787

### FUNCTIONAL INTEGRATION

- The quest for an integrated flying helmet p 319 A93-28860

### FUNGAL DISEASES

- Coccidioidomycosis - A persistent threat to deployed populations p 380 A93-49228

### FUNGI

- Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388  
Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391  
The production and use of aerobically grown inocula of VAM fungi in the native plant nursery [PB92-204973] p 43 A93-15208

### FUZZY SETS

- A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267

### FUZZY SYSTEMS

- Adaptive autonomous target cuer p 148 A93-19784

- Fuzzy neural network methodology applied to medical diagnosis p 334 A93-29546  
Quantification of human responses p 340 A93-29564

### Hyperbaric treatment

- Daily exercise routines p 360 A93-31455  
Atmospheric control systems p 365 A93-31456  
Rotational speed control p 365 A93-31457  
Vibration isolation p 365 A93-31458

## G

### GALACTIC COSMIC RAYS

- Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975  
Single particle effects, Biostack, and risk evaluation - Studies on the radiation risk from Galactic cosmic rays p 202 A93-32243  
Human exposure to galactic cosmic rays in space p 410 A93-54887

### GAMMA RAYS

- Combined effect of head-down tilt and gamma rays on the higher nervous activity of rats p 242 A93-35262  
Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263  
Flow cytometric analysis of lymphocyte surface markers following a 1-Gy dose of gamma radiation p 281 A93-41170

### GARMENTS

- Modeling clothed figures [AD-A257037] p 71 A93-15363  
Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress [AD-A258552] p 148 A93-19955  
Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 A93-29471

### GAS ANALYSIS

- Design of ion source of respiratory mass spectrometer p 11 A93-13713  
Explosives search dogs p 159 A93-21933

### GAS CHROMATOGRAPHY

- Methods development for total organic carbon accountability [NASA-CR-184438] p 40 A93-12949  
Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis [AD-A255582] p 95 A93-16041  
Carbon monoxide exposure of subjects with documented cardiac arrhythmias [PB93-179943] p 337 A93-30890

### GAS COMPOSITION

- Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation p 77 A93-18301  
Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 A93-11279

### GAS DENSITY

- Control of breathing under conditions of altered atmospheric density during muscular work p 89 A93-18288  
The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294

### GAS DETECTORS

- The challenge of biodegradation for screening persons carrying explosives p 159 A93-21931  
Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 A93-30882

### GAS EXCHANGE

- Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide p 271 A93-39707  
Minitron II system for precise control of the plant growth environment p 357 A93-46470  
Effects of CO<sub>2</sub> and photosynthetic photon flux on yield, gas exchange and growth rate of *Lactuca sativa* L. 'Waldmann's Green' p 397 A93-52723

### GAS GIANT PLANETS

- Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 A93-18551

### GAS MIXTURES

- Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287  
Motor activity of animals under elevated pressure p 75 A93-18290  
Sleep as a restorative process under extreme conditions p 89 A93-18291  
Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293  
The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294

## SUBJECT INDEX

- Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure p 76 A93-18296  
Maximal lung ventilation and forced expiration rate under hyperbaria p 76 A93-18297  
An analysis of the respiratory muscle fatigue under resistive loading when breathing gas mixtures containing different amounts of oxygen p 76 A93-18299  
A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302  
Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 A93-30882

### GAS PRESSURE

- Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287  
The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys p 75 A93-18289  
Sleep as a restorative process under extreme conditions p 89 A93-18291  
Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 A93-29216

### GAS SPECTROSCOPY

- Design of ion source of respiratory mass spectrometer p 11 A93-13713

### GAS-SOLID INTERACTIONS

- Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces --- space biological evolution p 411 A93-53286

### GASTROINTESTINAL SYSTEM

- Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine p 20 A93-11311

### GELS

- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 A93-26587  
Comparative mutagenesis of human cells in vivo and in vitro [DE93-012269] p 276 A93-28651

### GEMINI FLIGHTS

- NASA's manned space flight program [AAS PAPER 91-626] p 402 A93-55805

### GENE EXPRESSION

- Selection of a ribozyme that functions as a superior template in a self-copying reaction p 111 A93-22053  
Plasmid encoded virulence of *Yersinia* [FOA-B-40419-4.4] p 275 A93-28199  
Gene transcription and electromagnetic fields [DE93-010854] p 276 A93-28848

### GENERAL AVIATION AIRCRAFT

- Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary [AD-A257016] p 99 A93-16189

### GENERAL OVERVIEWS

- An overview of the dynamic predictive architecture for robotic assistants p 191 A93-29112

### GENES

- Molecular biology of anaerobic aromatic biodegradation [AD-A255213] p 42 A93-13863  
Molecular approach to hypothalamic rhythms [AD-A264438] p 335 A93-30421

### GENETIC CODE

- Experimental studies on the origin of the genetic code and the process of protein synthesis - A review update p 73 A93-17822

- The evolution of aminoacyl-tRNA synthetases, the biosynthetic pathways of amino acids and the genetic code p 73 A93-17825  
Relationship between G + C in silent sites of codons and amino acid composition of human proteins p 358 A93-47099

- A model for the prebiotic synthesis of peptides which throws light on the origin of the genetic code and the observed chirality of life p 412 A93-56000

- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 A93-26587

- Intracellular targeting of the *Yersinia* YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 A93-27989

- Plasmid encoded virulence of *Yersinia* [FOA-B-40419-4.4] p 275 A93-28199  
Comparative mutagenesis of human cells in vivo and in vitro [DE93-012269] p 276 A93-28651

### GENETIC ENGINEERING

- Selection of a ribozyme that functions as a superior template in a self-copying reaction p 111 A93-22053

## SUBJECT INDEX

- Cognitive competencies - Products of genes, experience, and technology --- for training of primates p 201 A93-32113
- Molecular biology of anaerobic aromatic biodegradation**  
[AD-A25213] p 42 N93-13863
- Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan [FOA-B-40421-4.4] p 275 N93-28200
- Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia [FOA-B-40422-4.4] p 275 N93-28212
- GENETICS**
- Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster* p 1 A93-11691
- Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835
- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation [DE92-018066] p 5 N93-10974
- Mathematics and biology: The interface, challenges and opportunities [DE92-041207] p 82 N93-17359
- Primary events in olfactory reception [AD-A260562] p 255 N93-25944
- Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle [NASA-CR-4497] p 269 N93-26157
- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 N93-26587
- Comparative mutagenesis of human cells in vivo and in vitro [DE93-012269] p 276 N93-28651
- Gene transcription and electromagnetic fields [DE93-010854] p 276 N93-28848
- GEOCHEMISTRY**
- Chemical environments of submarine hydrothermal systems --- supporting abiogenetic theory p 74 A93-18005
- Mineral theories of the origin of life and an iron sulfide example p 74 A93-18009
- Aqueous high-temperature and high-pressure organic geochemistry of hydrothermal vent systems p 397 A93-53285
- GEOMAGNETISM**
- A comparative analysis of the bone marrow cell composition in rats following a long-duration continuous or interrupted exposure to a hypogeomagnetic field p 240 A93-35213
- Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenous layer of rat testes p 240 A93-35229
- GEOMETRICAL OPTICS**
- A computational model for the stereoscopic optics of a head-mounted display p 390 A93-49393
- GEOMORPHOLOGY**
- The possibility of life on Mars during a water-rich past p 196 A93-27887
- GERIATRICS**
- Dual-task training strategies and aging [AD-A258261] p 131 N93-18027
- GERMINATION**
- A study of the effects of micro-gravity on seed germination p 40 N93-13167
- Final results of space exposed experiment developed for students p 329 N93-29702
- Continued results of the seeds in space experiment p 330 N93-29703
- GERONTOLOGY**
- Conference on Correlations of Aging and Space Effects on Biosystems, Oct. 30-Nov. 1, 1989, Proceedings --- Book p 79 A93-20651
- GESTALT THEORY**
- The perception of articulated motion: Recognizing moving light displays [AD-A256046] p 59 N93-14660
- GLARE**
- Effects of laser glare on visual search performance p 180 A93-28158
- Discomfort glare from high-intensity discharge headlamps: Effects of context and experience [PB93-174720] p 336 N93-30659
- GLAUCOMA**
- The development of a visual color checkerboard stimulator p 30 A93-13723
- Intraocular pressure in microgravity p 85 A93-17539
- The pigmentary dispersion disorder in USAF aviators p 87 A93-18033

## GLOBULINS

- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type p 153 A93-28698

## GLOVES

- Effects of error-proofing and chemical/biological/radiation protective glove use on touch panel operation p 186 A93-27152
- Glovebox design for Space Station Freedom Crew Health Care System [SAE PAPER 921139] p 292 A93-41326
- The Centrifuge Facility Life Sciences Glovebox configuration study [SAE PAPER 921158] p 293 A93-41341
- Development of a test protocol for evaluating EVA glove performance [SAE PAPER 921254] p 298 A93-41424
- Power assist EVA glove development [SAE PAPER 921255] p 299 A93-41425
- Development of the Hermes EVA Space Suit Glove [SAE PAPER 921256] p 299 A93-41426
- Gloved operator performance study [AD-A256894] p 104 N93-16048
- Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment [NASA-TM-104767] p 234 N93-23129
- An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128
- Investigation of the effects of Extra Vehicular Activity (EVA) and Launch and Entry (LES) gloves on performance p 266 N93-26061
- EVA Glove Research Team [NASA-CR-193014] p 313 N93-27847
- Power assist EVA glove development p 314 N93-27850
- Biophysical model for handwear insulation testing [AD-A262926] p 320 N93-28884
- GLUCOSE**
- Blood and urine responses to ingesting fluids of various salt and glucose concentrations --- to combat orthostatic intolerance p 83 A93-17528
- Effects of sleep deprivation and exercise on glucose tolerance p 281 A93-41165
- Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178
- Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle p 399 A93-55458
- Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school p 368 N93-32248

## GLUTAMATES

- Physiological analyses of the afferents controlling brain neurochemical systems p 14 N93-11146
- Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms [AD-A259803] p 217 N93-23459

## GLYCOGENS

- Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALs) [AD-A258364] p 121 N93-18209

## GLYCOLYSIS

- Metabolic factors influencing myocardial recovery from acidosis (CiC3) [AD-A252376] p 14 N93-10796

## GOGGLES

- I-NIGHTS and beyond --- Interim-Night Integrated Goggle and Head Tracking System p 227 A93-30054
- USAF/USN fixed wing night vision - The mission p 227 A93-30055
- Helmet mounted display with multiple image sources p 227 A93-30057
- Helmet-mounted display for the night attack mission p 228 A93-30059
- Low-cost monochrome CRT helmet display p 228 A93-30061
- Spatial contrast sensitivity through aviator's night vision imaging system p 393 A93-52300
- Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles [AD-A254983] p 35 N93-12508
- Integration of exterior lighting systems and night vision imaging systems [AD-A254826] p 63 N93-12732
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment) [AD-A255525] p 70 N93-14554
- Night vision manual for the flight surgeon [AD-A257059] p 104 N93-15710

## GRAVITATIONAL EFFECTS

- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 N93-17697
- Helicopter night vision goggle testing in the United Kingdom p 148 N93-19917
- Night vision goggle training: Development and production of six video programs [AD-A258529] p 148 N93-20050
- Interpupillary and vertex distance effects on field-of-view and acuity with ANVIS [AD-A261259] p 268 N93-26265
- Goggles emergency release apparatus [AD-D015685] p 351 N93-29607
- CATS EYES adjustment procedures [AD-A264069] p 353 N93-29924
- The effects of superimposing symbology on a simulated night vision goggle display [AD-A263458] p 354 N93-30590
- GOVERNMENT/INDUSTRY RELATIONS**
- Achieving the promise of the bioscience revolution: The role of the Federal Government [PB93-139970] p 244 N93-25457
- GOVERNMENTS**
- Achieving the promise of the bioscience revolution: The role of the Federal Government [PB93-139970] p 244 N93-25457
- GRAPH THEORY**
- Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848
- GRAPHS (CHARTS)**
- Graphical displays - Implications for divided attention, focused attention, and problem solving p 102 A93-19984
- Choosing specifiers - An evaluation of the basic tasks model of graphical perception p 102 A93-19985
- Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848
- GRAVIRECEPTORS**
- Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548
- Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*) p 329 A93-44941
- GRAVITATION**
- The physiological limitations of man in the high G environment p 319 N93-28861
- GRAVITATIONAL EFFECTS**
- New pharmacologic approaches to the prevention of space/motion sickness p 85 A93-17538
- Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212
- Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248
- Interlabyrinth otolithic asymmetry under normal conditions and after the effect of a gravity change p 242 A93-35264
- Possible biological significance of the curvature of equipotential surfaces of gravity-force tidal variations p 324 A93-43025
- Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (*Avena sativa*) p 358 A93-46472
- Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report p 375 A93-49206
- The simulation of microgravity conditions on the ground --- and biological effects of weightlessness p 375 A93-49207
- Centrifuges - Evolution of their uses in plant gravitational biology and new directions for research on the ground and in spaceflight p 376 A93-49211
- The fast rotating clinostat: A history of its use in gravitational biology and a comparison of ground-based and flight experiment results p 376 A93-49212
- Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214
- Incidence of cardiac dysrhythmias occurring during centrifuge training p 384 A93-52297
- Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407
- An overview of gravitational physiology [NASA-TM-102849] p 35 N93-12319
- A study of the effects of micro-gravity on seed germination p 40 N93-13167
- Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 N93-13449
- Bone loss and human adaptation to lunar gravity p 51 N93-14002
- Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458



- A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES) [NASA-CR-192219] p 114 N93-19377
- Radiological assessment for Space Station Freedom [NASA-TM-104758] p 128 N93-20303
- How do zooplankton feed? A critical microgravity experiment p 158 N93-21097
- Gravity as a factor in the orientation and vertical migration of marine zooplankton p 158 N93-21098
- Studying the effects of microgravity on lower vertebrate development and behavior p 158 N93-21099
- Aimed arm movements under changed gravity p 193 N93-21113
- Gravitational Biology Facility on Space Station: Meeting the needs of space biology p 206 N93-22625
- NASA supporting studies for microgravity research on eye movements [NASA-CR-193233] p 285 N93-29041
- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400
- GRAVITATIONAL FIELDS**
- Possible biological significance of the curvature of equipotential surfaces of gravity-force tidal variations p 324 A93-43025
- The simulation of microgravity conditions on the ground ... and biological effects of weightlessness p 375 A93-49207
- The internal dynamics of slowly rotating biological systems p 375 A93-49208
- Development of physical and mathematical models for the Porous Ceramic Tube Plant Nitrification System (PCTPNS) [NASA-TM-107551] p 4 N93-10085
- GRAVITATIONAL PHYSIOLOGY**
- The space life sciences strategy for the 21st century p 1 A93-10636
- The cardiovascular system p 46 A93-15530
- Accuracy of aimed arm movements in changed gravity p 56 A93-16159
- Potential hazards of high anti-Gz suit protection p 48 A93-16164
- Frontier Symposium on Clinical Pharmacology in Space, 10th, Houston, TX, May 10, 11, 1990, Proceedings p 83 A93-17527
- Cerebral blood flow during +Gz acceleration as measured by transcranial Doppler p 84 A93-17532
- Intraocular pressure in microgravity p 85 A93-17539
- Human autonomic responses to actual and simulated weightlessness p 85 A93-17540
- Optimal sampling theory and population modelling - Application to determination of the influence of the microgravity environment on drug distribution and elimination p 85 A93-17542
- Effects of gravity on gastric emptying, intestinal transit, and drug absorption p 85 A93-17543
- Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547
- Changes in total body water during spaceflight p 86 A93-17548
- Alterations of proprioceptive function in the weightless environment p 86 A93-17549
- Cardiovascular adaptation to spaceflight p 86 A93-17550
- Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551
- Hypokinesia and weightlessness: Clinical and physiological aspects --- Book [ISBN 0-8236-2415-3] p 87 A93-17897
- Visual scene effects on the somatogravic illusion p 88 A93-18035
- Biomedical engineering and space p 103 A93-20015
- Cardiovascular physiology in space flight p 93 A93-20654
- The mechanical control system of bone in weightless spaceflight and in aging p 94 A93-20657
- Altered cell function in microgravity p 79 A93-20660
- Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899
- Energetics of walking and running - Insights from simulated reduced-gravity experiments p 116 A93-21687
- The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204
- The effect of G-LOC on psychomotor performance and behavior p 130 A93-25205
- Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206
- The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686

- Effects of antihypertensive suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693
- Influence of gravito-inertial force level on vestibular and visual velocity storage in yaw and pitch p 165 A93-28701
- Gravitational stress and volume regulation p 165 A93-28709
- Neurology of microgravity and space travel p 168 A93-28735
- Gravito-inertial force level affects the appreciation of limb position during muscle vibration p 169 A93-28744
- Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745
- Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750
- Microgravity and bone adaptation at the tissue level p 170 A93-28761
- Distinguishing unloading- versus reloading-induced changes in rat soleus muscle p 157 A93-28763
- Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765
- Effect of simulated weightlessness on microvessel permeability of various organs in rabbits p 199 A93-30438
- Cardiovascular problems during space flight p 213 A93-30445
- The Biological Flight Research Facility p 239 A93-34581
- Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248
- Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710
- Altering the position of the first horizontal cleavage furrow of the amphibian (*Xenopus*) egg reduces embryonic survival p 272 A93-39717
- Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327
- Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179
- Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs p 326 A93-44183
- The effect of G-experience on heart rate during +Gz loading p 333 A93-45322
- Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177
- Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge p 379 A93-49178
- Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report p 375 A93-49206
- Some qualitative and quantitative aspects of the fast-rotating clinostat as a research tool --- for effects of weightlessness on biological objects p 375 A93-49209
- Centrifuges - Their development and use in gravitational biology p 376 A93-49210
- Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295
- Functional adaptation of different rat skeletal muscles to weightlessness p 377 A93-49575
- The psychosocial adaptation of children in space - A speculation p 388 A93-50338
- Acute hypertensive response to +Gz acceleration in mildly hypertensive pilots p 386 A93-52307
- Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404
- Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406
- Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407
- Space flight and immune system p 14 N93-11284
- Asthma in aircrew: Assessment, treatment and disposition p 21 N93-11315
- An overview of gravitational physiology [NASA-TM-102849] p 35 N93-12319
- Bone loss and human adaptation to lunar gravity p 51 N93-14002
- STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission [NASA-TM-108034] p 80 N93-15823
- Space life sciences overview p 158 N93-21074
- Cerebral autoregulation in microgravity p 173 N93-21112
- Aimed arm movements under changed gravity p 193 N93-21113
- Gravitational Biology Facility on Space Station: Meeting the needs of space biology p 206 N93-22625

- Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 N93-22800
- Neural processing of gravity information [NASA-CR-192766] p 209 N93-23233
- Physiological experiments within the project AustroMir p 219 N93-24354
- Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363
- Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367
- Influence of microgravity on immune system and genetic information p 220 N93-24370
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-022] p 253 N93-25407
- The physiological limitations of man in the high G environment p 319 N93-28861
- Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 N93-29651
- GRAVITROPISM**
- A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES) [NASA-CR-192219] p 114 N93-19377
- Gravity and root morphogenesis p 210 N93-24403
- GREENHOUSES**
- Dynamics of the controlled environment conditions in 'SVET' greenhouse in flight p 152 A93-27460
- The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410
- GROUND BASED CONTROL**
- Human-computer cooperative problem solving in satellite ground control p 188 A93-27163
- Ground-remote control for space station telerobotics with time delay [AAS PAPER 92-052] p 392 A93-50592
- GROUND CREWS**
- Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188
- Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382
- Lipidemic profile of Hellenic Airforce officers p 362 N93-32250
- GROUND EFFECT MACHINES**
- Performance differences in psychomotor and dichotic listening tests among landing craft air cushion vehicle operator trainees p 177 A93-27174
- GROUND TESTS**
- Ground based simulation in test and evaluation education [AIAA PAPER 92-4066] p 24 A93-11252
- Human factors applications in control systems design for ground testing of turbine engines p 409 A93-54410
- Ground testing of bioconvective variables such as morphological characterizations and mechanisms which regulate macroscopic patterns p 82 N93-17303
- GROUND WATER**
- The possibility of life on Mars during a water-rich past p 196 A93-27887
- Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377
- Water in the solar system and its role in exobiology; Proceedings of the European Geophysical Society General Assembly, 26th, Wiesbaden, Germany, Apr. 22-26, 1991 p 268 A93-36551
- Liquid water and the origin of life p 268 A93-36552
- Roles of water molecules in bacteria and viruses p 243 A93-36555
- Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558
- Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents [AD-A255696] p 42 N93-14557
- GROUP DYNAMICS**
- The role of mental models in team performance in complex systems p 262 A93-34985
- An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 N93-12509
- GROWTH**
- Identification of a critical period for motor development in neonatal rats p 157 A93-28764
- Mechanical forces and their second messengers in stimulating cell growth in vitro p 204 A93-33043

- Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248
- Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 A93-16552
- Gravity and root morphogenesis p 210 A93-24403
- Development of Arabidopsis thaliana grown under microgravity conditions p 211 A93-24404
- Electrophoretic separation of cells and particles from rat pituitary and rat spleen [NASA-CR-193073] p 276 A93-28415

## H

### HABITABILITY

- Habitable zones around main sequence stars p 197 A93-28376
- Lunar base requirements for human habitability p 345 A93-41995
- Long-duration isolation and confinement: Human factors issues and research requirements p 100 A93-16808

### HABITATS

- Habitat automation p 33 A93-11976
- Scaling issues for biodiversity protection [DE92-016689] p 6 A93-12315
- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 A93-17806
- Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 A93-26066
- Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model p 245 A93-26069
- Development of a pyrolysis waste recovery model with designs, test plans, and applications for space-based habitats p 267 A93-26076

### HABITS

- The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas p 369 A93-32257

### HABITUATION (LEARNING)

- Background and objectives of the PARAT program p 343 A93-31230
- The PARAT tests as examination system p 344 A93-31238

### HAIR

- Hair cell tufts and afferent innervation of the bullfrog crista ampullaris p 329 A93-44931

### HALLEY'S COMET

- Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824
- Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561

### HALOGEN COMPOUNDS

- Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents [AD-A255696] p 42 A93-14557

### HALOPHILES

- Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557

### HAND (ANATOMY)

- A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging [SAE PAPER 921253] p 298 A93-41423
- Behavioral asymmetries of psychomotor performance in rhesus monkeys (Macaca mulatta) - A dissociation between hand preference and skill p 339 A93-44923
- Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 A93-14870
- A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population [NASA-TP-3286] p 96 A93-16619
- Prevention of cumulative trauma disorders [PB93-188332] p 338 A93-31138

### HANDBOOKS

- Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 A93-15968
- Space Biology Initiative. Trade Studies, volume 1 [NASA-CR-190989] p 207 A93-23068
- Space Biology Initiative. Trade Studies, volume 2 [NASA-CR-190990] p 208 A93-23079

- Medical aspects of cold weather operations: A handbook for medical officers [AD-A263559] p 336 A93-30588

### HANDEDNESS

- Handedness and motor programming effects of manual control and movement [AD-A264022] p 340 A93-30027

### HARDENING (SYSTEMS)

- Studies of a laser/nuclear thermal hardened body armor [AD-A255128] p 34 A93-12423

### HARDWARE

- Comparison of CRT display measurement techniques p 229 A93-30067
- Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357] p 307 A93-41516
- Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 A93-23069
- Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 A93-23071
- Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 A93-23080
- Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 A93-23081
- Marshall Space Flight Center ECLSS technology activities p 312 A93-27724

### HARDWARE UTILIZATION LISTS

- Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 A93-23080
- Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 A93-23082
- Space Station Freedom biomedical monitoring and countermeasures: Biomedical facility hardware catalog [NASA-CR-193156] p 246 A93-26700

### HARNESSES

- Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065

### HARRIER AIRCRAFT

- Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions [AIAA PAPER 92-4233] p 28 A93-13331

### HAZARDS

- Potential hazards of high anti-Gz suit protection p 48 A93-16164
- Occupational ergonomics in space p 68 A93-14013
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 A93-16552
- Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 A93-29406

### HEAD (ANATOMY)

- Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074
- The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202
- Anthropometry for HMD design --- using three-dimensional quantitative morphology p 229 A93-30069
- Improved head support stand adjustable by compoundturnbuckle [AD-D015384] p 55 A93-15249
- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz [AD-A258136] p 120 A93-17985
- A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 A93-19672
- Upper interior head protection. Volume 1. The development of a research test procedure [PB93-113769] p 194 A93-21537
- Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 A93-21795
- Methods for characterizing the human head for the design of helmets [AD-A263875] p 353 A93-29889

### HEAD DOWN TILT

- Effects of antimotion sickness drug mixture B on ultrastructures of cerebral and cerebellar cortexes in suspended rabbits p 10 A93-13704
- The effects of cephalad body fluid redistribution on the ultrastructure of the vestibular apparatus of guinea pig p 4 A93-13717

- Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972
- Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt p 37 A93-14974
- Changes of REG during 4h head-down bed-rest p 46 A93-16075

- Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530
- Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029

- Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899
- Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044
- Response of the circadian system to 6 deg head-down tilt bed rest p 117 A93-24045
- Increased orthostatic blood pressure variability after prolonged head-down tilt p 161 A93-28676
- Influence of posture and prolonged head-down tilt on cardiovascular reflexes p 161 A93-28677
- Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679
- Effects of head-down tilt for 10 days on the compliance of the leg p 162 A93-28680
- Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681
- Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682

- Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683
- Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684
- Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685

- The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686

- Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687
- Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688
- Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689

- Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721
- Effect of simulated weightlessness on microvessel permeability of various organs in rabbits p 199 A93-30438

- Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208
- Hemodynamics in monkeys during antiorthostatic hypokinesia at angles of -6 and -20 deg p 241 A93-35259

- Dynamics of the central and peripheral circulation of active rats on the first day of antiorthostatic hypokinesia (The role of training) p 242 A93-35261

- Combined effect of head-down tilt and gamma rays on the higher nervous activity of rats p 242 A93-35262
- Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493
- Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494

- Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716

- Response of genioglossus EMG activity to passive tilt in men p 279 A93-41118
- Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122

- Performance and mood-state parameters during 30-day 6 deg head-down bed rest with exercise training p 281 A93-41169

- Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats p 323 A93-42192

- Correlation between the lymph dynamics and venous pressure during short-term antiorthostatic effects p 325 A93-43070

- Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery p 326 A93-44176

- Changes in the central hemodynamics under antiorthostasis in humans with different blood circulation types and physical training levels p 359 A93-46967

- Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220

- Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221

## HEAD MOVEMENT

- Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295
- Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404
- Volume-homostatic mechanisms in humans during a 12-h posture change p 387 A93-52620
- Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females [NASA-TP-3298] p 128 N93-20318
- ### HEAD MOVEMENT
- Predictable eye-head coordination during driving p 57 A93-16373
- The perception of heading during eye movements p 99 A93-20692
- The effects of head and sensor movement on flight profiles during simulated dive bombing p 185 A93-27131
- Military aircrew head support system p 231 A93-31944
- Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural p 203 A93-32773
- Response characteristics of the human torsional vestibuloocular reflex p 215 A93-32774
- Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223
- Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight p 341 N93-30542
- Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 N93-32237
- ### HEAD-UP DISPLAYS
- Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions [AIAA PAPER 92-4233] p 28 A93-13331
- HUD climb/dive ladder configuration and unusual attitude recovery p 185 A93-27129
- Headphone localization of speech stimuli p 176 A93-27143
- Colour head-up displays - Help or hindrance? p 187 A93-27154
- Head-up display standardization and the utility of analog vertical velocity information during instrument flight p 189 A93-27451
- Helmet-mounted systems technology planning for the future p 227 A93-30052
- Military aircrew head support system p 231 A93-31944
- Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895
- Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles [AD-A254983] p 35 N93-12508
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857
- Panoramic cockpit displays p 145 N93-19765
- Attention factors associated with head-up display and helmet-mounted display systems [AD-A260204] p 235 N93-24001
- Attitude awareness enhancements for the F-16 head-up display [AD-A260280] p 236 N93-24168
- Oculo-motor responses and virtual image displays p 319 N93-28862
- Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display [AD-A264401] p 353 N93-30167
- ### HEALING
- Time course of functional repair of the alveolar epithelium after hyperoxic injury p 78 A93-20032
- Healing of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260
- ### HEALTH
- The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit p 10 A93-12969
- Living and working in space - Evolution of nursing in a new environment p 166 A93-28710
- Health services at the Kennedy Space Center p 154 A93-28711
- Kennedy Space Center environmental health program p 166 A93-28713
- Health in space - And on Earth p 156 A93-28738
- Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783
- Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study p 216 A93-32786

- Space Station Freedom Environmental Health Care Program [SAE PAPER 921138] p 292 A93-41325
- Crew Health Care Systems installations for Space Station Freedom [SAE PAPER 921249] p 298 A93-41420
- A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321
- Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 N93-12145
- A health care system for the Space Station [NASA-TM-108093] p 65 N93-13571
- Biomedical Polar Research Workshop Minutes [NASA-TM-108026] p 81 N93-16799
- NASA/NSF Workshop on Antarctic Research p 81 N93-16803
- Infectious disease p 81 N93-16804
- Long-duration isolation and confinement: Human factors issues and research requirements p 100 N93-16808
- The US Navy Healthy Back Program: Effect on back knowledge among recruits [AD-A258368] p 121 N93-18210
- Health effects of low-frequency electric and magnetic fields [DE93-005675] p 127 N93-19838
- Environmental health discipline science plan [NASA-TM-108042] p 173 N93-21369
- Space human factors discipline science plan [NASA-TM-108023] p 194 N93-21370
- Crew health p 217 N93-22630
- Tobacco and health of the pilot [ETN-93-93693] p 217 N93-23414
- Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 N93-24021
- Potential human health effects associated with power frequency electric and magnetic fields [PB93-132678] p 221 N93-24590
- Achieving the promise of the bioscience revolution: The role of the Federal Government [PB93-139970] p 244 N93-25457
- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595
- ### HEALTH PHYSICS
- Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- Transcutaneous Analyte Measuring Methods (TAMM), phase 2 [AD-A256327] p 54 N93-15192
- Space radiation health program plan [NASA-TM-108036] p 123 N93-18375
- ### HEARING
- Measurement and evaluation of blast overpressure during F-15A crew station vulnerability assessment test [AD-A257152] p 104 N93-16033
- An automated version of the dichotic listening test: Hardware, software, and procedural details [AD-A258114] p 120 N93-17895
- Measuring hearing protection device performance using the metrosonics db-3100 sound level analyzer (dosimeter) [AD-A260852] p 265 N93-25787
- Programmable interactive system for cochlear implant electrode stimulation [AD-A262558] p 333 N93-29421
- ### HEART
- Heart and lung alterations in neonatal rats exposed to CO or high altitude p 77 A93-20027
- Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764
- ### HEART DISEASES
- Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049
- Non-invasive evaluation of the cardiac autonomic nervous system by PET [DE92-041077] p 96 N93-16441
- Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 N93-32256
- ### HEART FUNCTION
- Posture and the circulation - The age effect p 93 A93-20653
- Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044
- The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652
- Cardiovascular problems during space flight p 213 A93-30445

- Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity p 240 A93-35224
- The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257
- Incidence of cardiac dysrhythmias occurring during centrifuge training p 384 A93-52297
- Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990 p 123 N93-18376
- [NASA-CR-4475] p 125 N93-19648
- Cardiopulmonary discipline science plan [NASA-TM-108040] p 125 N93-19648
- ### HEART RATE
- The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690
- Characteristics of heart rate response (HRR) in young men during exercise p 10 A93-13706
- Effects of different inhalant O<sub>2</sub> concentrations on ventilatory and heart rate kinetic responses during exercise p 11 A93-13707
- Influence of graded dehydration on hyperthermia and cardiovascular drift during exercise p 44 A93-14971
- Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt p 37 A93-14974
- Cardiovascular adaptation to spaceflight p 86 A93-17550
- Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287
- T wave changes in humans and dogs during experimental dives p 92 A93-20026
- Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898
- Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049
- Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683
- Assessing pilot workload - Why measure heart rate, HRV and respiration? p 168 A93-28741
- Cardiovascular responses during recovery from exercise and thermal stress p 212 A93-30282
- Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208
- The effect of G-experience on heart rate during +Gz loading p 333 A93-45322
- Central cardiovascular pressures during graded water immersion in humans p 402 A93-55457
- Development and enhancement of a mode of performance and decision making under stress in a real life setting [AD-A257796] p 123 N93-18363
- Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367
- MAC to VAX connectivity: Heart rate spectral analysis system p 254 N93-25594
- Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243
- ### HEAT ACCLIMATIZATION
- Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166
- The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172
- Effect of heat acclimatization on cAMP level in plasma, cerebrospinal fluid and preoptic area-hypothalamus in hyperthermal rabbits p 199 A93-30437
- ### HEAT BALANCE
- Study of the functioning of the central and the peripheral contours of the thermoregulation system using a thermophysical model of the rabbit body p 111 A93-23075
- Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates [AD-A262762] p 285 N93-28939
- ### HEAT EXCHANGERS
- Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357] p 307 A93-41516
- Space Station Condensing Heat Exchanger biofilm formation and control evaluation [SAE PAPER 921383] p 308 A93-41541
- ### HEAT FLUX
- The efficiency of thermoregulatory responses in the cooling of the organism p 325 A93-43136
- ### HEAT PIPES
- An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128

## SUBJECT INDEX

**HEAT PUMPS**

Thermal control systems for low-temperature heat rejection on a lunar base  
[NASA-CR-191286] p 65 N93-13717

**HEAT RADIATORS**

Preliminary design of a radiator shading device for a lunar outpost  
[NASA-CR-192016] p 139 N93-18019

**HEAT SOURCES**

An innovative method for hand protection from extreme cold using heat pipe  
[AD-A259720] p 235 N93-24128

**HEAT STROKE**

Tissue-specific noradrenergic activity during acute heat stress in rats p 323 A93-42193

**HEAT TOLERANCE**

Thermal convergence fails to predict heat tolerance limits p 8 A93-10331

Preliminary study on the physiological changes and tolerance in ground squirrels under several specific experimental conditions p 2 A93-13532

The optimum design of personal liquid cooling system p 60 A93-14314

The physiological consequences of simulated helicopter flight in NBC protective equipment p 117 A93-24049

The effect of wearing protective chemical warfare combat clothing on human performance p 230 A93-30287

Effect of heat acclimatization on cAMP level in plasma, cerebrospinal fluid and preoptic area-hypothalamus in hyperthermic rabbits p 199 A93-30437

Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49218

Continuous vs. intermittent work with Canadian forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49219

Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619

The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 N93-12491

Thermal stress in US Air Force operations [AD-A255785] p 51 N93-14027

Physiological stress from chemical defense clothing and equipment [AD-A255786] p 51 N93-14028

Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress [AD-A258552] p 148 N93-19955

Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment [AD-A258502] p 129 N93-20400

Evaluation of two microclimate cooling air vests on a heated mannequin [AD-A259410] p 194 N93-21269

AFTERRISE: Deep body temperature following exercise [AD-A259887] p 218 N93-23984

Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 N93-23995

Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 N93-29471

**HEAT TRANSFER**  
Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients p 88 A93-18036

Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357] p 307 A93-41516

ASDA - Advanced Suit Design Analyzer computer program [SAE PAPER 921381] p 308 A93-41539

An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128

Lunar base thermal management/power system analysis and design p 315 N93-27985

**HEAVY IONS**  
Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

**HELICOPTER CONTROL**

Precinical cardiovascular and neurological 'occupation-related pathological symptoms in helicopter pilots p 91 A93-18416

Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

**HELICOPTER PERFORMANCE**

The relationship between computer scoring and safety-pilot grading of flight performance [AD-A256245] p 58 N93-14600

**HELICOPTERS**

Safety concerns as a factor in pilot desire to change aircraft p 129 A93-24040

The physiological consequences of simulated helicopter flight in NBC protective equipment p 117 A93-24049

Back ache in helicopter pilots p 382 A93-49566

Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308

Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles [AD-A254983] p 35 N93-12508

Human factors research in aircrew performance and training: 1986-1991 [AD-A254455] p 63 N93-12609

Design guide for the ergonomic aspects of helicopter crew seating [ISVR-TR-209] p 65 N93-13464

The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft p 146 N93-19772

CVA, cockpit design and development tool p 147 N93-19780

Equipment, more or less ready to be used in helicopters p 148 N93-19785

Helicopter night vision goggle testing in the United Kingdom p 148 N93-19917

Helicopter simulation: An aircrew training and qualification perspective p 342 N93-30676

Training effectiveness assessment: Where are we? p 342 N93-30679

Current training: Where are we? p 342 N93-30680

Training effectiveness assessment: Methodological problems and issues p 342 N93-30684

Application and validation of workload assessment techniques [AD-A254575] p 366 N93-32012

**HELIUM**  
Control of breathing under conditions of altered atmospheric density during muscular work p 89 A93-18288

**HELIUM ISOTOPES**  
Potential of derived lunar volatiles for life support p 67 N93-13998

**HELIUM-NEON LASERS**  
Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228

**HELIUM-OXYGEN ATMOSPHERES**  
Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

**HELMET MOUNTED DISPLAYS**  
Simulator sickness experience in simulators equipped with fiber optic helmet mounted display systems [AIAA PAPER 92-4135] p 136 A93-24490

Large-screen-projection, avionic, and helmet-mounted displays: Proceedings of the Meeting, San Jose, CA, Feb. 26-28, 1991 [SPIE-1456] p 181 A93-26881

Designing the right visor p 181 A93-26885

Methods for test and evaluation of night vision goggle integrated helmets p 188 A93-27182

Helmet-mounted displays III: Proceedings of the Meeting, Orlando, FL, Apr. 21, 22, 1992 [SPIE-1695] p 227 A93-30051

Helmet-mounted systems technology planning for the future p 227 A93-30052

Helmet-mounted systems test and evaluation process p 227 A93-30053

I-NIGHTS and beyond --- Interim-Night Integrated Goggle and Head Tracking System p 227 A93-30054

The advent of helmet-mounted devices in the combat aircraft cockpit - An operator's viewpoint p 227 A93-30056

Helmet mounted display with multiple image sources p 227 A93-30057

Color helmet display for the tactical environment - The pilot's chromatic perspective p 227 A93-30058

Helmet-mounted display for the night attack mission p 228 A93-30059

Helmet-mounted area of interest p 228 A93-30060

Low-cost monochrome CRT helmet display p 228 A93-30061

Low-cost color LCD helmet display p 228 A93-30062

Intensified CCD sensor applications for helmet-mounted displays p 228 A93-30064

Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065

Advances in miniature projection CRTs for helmet displays p 229 A93-30066

Comparison of CRT display measurement techniques p 229 A93-30067

Quantitative Helmet Mounted Display system image quality model p 229 A93-30068

Anthropometry for HMD design --- using three-dimensional quantitative morphology p 229 A93-30069

Evaluation of conformal and body-axis attitude information for spatial awareness p 229 A93-30070

Predictive nosepointing and flightpath displays for air-to-air combat p 229 A93-30071

Looks can kill --- helmet mounted displays, military avionics p 231 A93-31626

Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782

Timing considerations of Helmet Mounted Display performance p 233 A93-33449

Visual search in virtual environments p 233 A93-33450

Helmet Mounted Display symbology integration research p 263 A93-35914

Flight mechanics of high-performance aircraft [ISBN 0-521-34123-X] p 365 A93-47019

A computational model for the stereoscopic optics of a head-mounted display p 390 A93-49393

In-simulator assessment of trade-offs arising from mixture of color cuing and monocular, binoptic, and stereopsis cuing information p 407 A93-52916

A low cost helmet-mounted camera/display system for field testing teleoperator tasks p 408 A93-53122

Advanced technology for portable personal visualization [AD-A253808] p 32 N93-11783

Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles p 35 N93-12508

Helmet-mounted area-of-interest display [AD-A258275] p 139 N93-18029

Developing virtual cockpits p 145 N93-19764

Panoramic cockpit displays p 145 N93-19765

A new concept for helmet mounted vision p 145 N93-19767

The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769

Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data [AD-A259684] p 234 N93-23660

In-flight field-of-view with ANVIS [AD-A259905] p 235 N93-23992

Attention factors associated with head-up display and helmet-mounted display systems [AD-A260204] p 235 N93-24001

Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

Low-cost helmet-mounted displays [AD-A262616] p 317 N93-28479

Head-steered sensor flight test results and implications p 318 N93-28859

The quest for an integrated flying helmet p 319 N93-28860

Oculo-motor responses and virtual image displays p 319 N93-28862

Head mounted displays for virtual reality [AD-A263498] p 322 N93-29340

Integration of advanced teleoperation technologies for control of space robots p 366 N93-32107

**HELMETS**  
Flight helmet weight, +Gz forces, and neck muscle strain p 136 A93-24046

Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223

Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308

Protective helmet assembly [NASA-CASE-MSC-21842-1] p 106 N93-17088

The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769

Multi-function visor p 146 N93-19770

Helmeted head and neck dynamics under whole-body vibration p 264 N93-25531

The quest for an integrated flying helmet p 319 N93-28860

- Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs p 350 N93-29406  
 [AD-A263011]  
 Helmet visor support apparatus p 351 N93-29606  
 [AD-D015684]  
 Methods for characterizing the human head for the design of helmets p 353 N93-29889  
 [AD-A263875]

**HEMATOLOGY**

- Hematological changes in space microgravity environments p 46 A93-15528  
 Acceleration-induced effects on baboon blood chemistry p 376 A93-49224  
 Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 [DE92-040152] p 41 N93-13520  
 JPRS report: Science and technology. Central Eurasia: Life sciences p 253 N93-25407  
 [JPRS-ULS-92-022]  
 Fundamental diagnostic hematology: Anemia (second edition) p 338 N93-31140  
 [PB93-188662]  
 Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) p 338 N93-31158  
 [PB93-188670]

**HEMATOPOIESIS**

- Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212  
 A comparative analysis of the bone marrow cell composition in rats following a long-duration continuous or interrupted exposure to a hypogeomagnetic field p 240 A93-35213  
 Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116

**HEMODYNAMIC RESPONSES**

- The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690  
 Preliminary observation of influences of three forms of simulated weightlessness on hemorheological characteristics in rabbit p 3 A93-13538  
 Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044  
 The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204  
 Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206  
 Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781  
 Hemodynamic status of humans during a graded orthostatic test p 248 A93-35221  
 Diurnal rhythmicity of human orthostatic stability p 250 A93-35253  
 The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257  
 Hemodynamics in monkeys during antiorthostatic hypokinesia at angles of -6 and -20 deg p 241 A93-35259  
 Dynamics of the central and peripheral circulation of active rats on the first day of antiorthostatic hypokinesia (The role of training) p 242 A93-35261  
 Changes in the brain blood flow and respiration during psychoemotional stress p 252 A93-36723  
 Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716  
 Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance p 280 A93-41119  
 Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121  
 Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122  
 Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125  
 Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure p 281 A93-41168  
 Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177  
 Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude p 326 A93-44181  
 Changes in the central hemodynamics under antiorthostasis in humans with different blood circulation types and physical training levels p 359 A93-46967  
 Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 A93-49180

- Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574  
 Acute hypertensive response to 1 Gz acceleration in mildly hypertensive pilots p 386 A93-52307  
 Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity p 386 A93-52617  
 Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620  
 Central cardiovascular pressures during graded water immersion in humans p 402 A93-55457

**HEMODYNAMICS**

- Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968  
 Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972  
 Development of lower body negative pressure as a countermeasure for orthostatic intolerance p 83 A93-17529  
 Cerebral blood flow during +Gz acceleration as measured by transcranial Doppler p 84 A93-17532  
 Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547  
 Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899  
 Wall shear stress estimates in coronary artery constrictions p 170 A93-28759  
 Investigation of hemodynamics and sympatheticoadrenal system activity in air traffic controllers during their work p 247 A93-35209  
 Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493  
 Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494  
 Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220  
 Transcapillary fluid responses to lower body negative pressure p 380 A93-49292  
 Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295  
 Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400  
**HEMOGLOBIN**  
 Dynamic characteristic of changes of oxygen saturation of blood hemoglobin under conditions of acute hypoxia in human body p 91 A93-19993  
 Age-related changes in hemoglobin and erythrocyte levels p 250 A93-35250  
 Interactions between Hb, Mg, DPG, ATP, and Cl determine the change in Hb-O<sub>2</sub> affinity at high altitude p 279 A93-41117  
 Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin p 120 N93-17900  
 [AD-A258185]  
<sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 N93-28293  
**HEMORRHAGES**  
 Case report - Chronic sub-dural hematoma following high-speed ejection p 282 A93-41171  
 Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 N93-12014  
 Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin p 120 N93-17900  
 [AD-A258185]  
**HEMOSTATICS**  
 Animal surgery in microgravity p 112 A93-24047  
 Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) p 338 N93-31158  
 [PB93-188670]  
**HEPATITIS**  
 Clinical types of Hepatitis B p 15 N93-11286  
 Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287  
 Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations p 15 N93-11288  
 Vaccination against Hepatitis B: The Italian strategy p 15 N93-11289  
 Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300  
 Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304  
**HERMES MANNED SPACEPLANE**  
 Hermes ECLSS - Main requirements and technical solutions [SAE PAPER 921400] p 309 A93-41555  
 The European astronauts training programme p 226 N93-24346

**HETEROCYCLIC COMPOUNDS**

- Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435

**HEURISTIC METHODS**

- Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interlaces [AD-A254493] p 63 N93-12576  
 Formal aspects of human-computer interaction p 66 N93-13909  
 Specification of adaptive aiding systems [AD-A263071] p 314 N93-27927

**HIBERNATION**

- The role of dermorphin in the regulation of the winter hibernation processes in mammals p 38 A93-16748  
 Vagotropic effects of peptides isolated from the brain of hibernating suetiks p 38 A93-16749  
 Role of the central nervous system in the control of hibernation p 378 A93-51025

**HIGH ACCELERATION**

- Myocardial infarction occurring at the conclusion of centrifuge training in a 37-year-old aviator p 89 A93-18044

**HIGH ALTITUDE**

- Cognitive performance and event-related brain potentials under simulated high altitudes p 331 A93-42189  
 Cognitive function at high altitude p 386 A93-52505  
 Beta-adrenergic blockade and lactate metabolism during exercise at high altitude [AD-A263544] p 334 N93-29820  
**HIGH ALTITUDE BREATHING**  
 Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028  
 Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569  
 Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574

**HIGH ALTITUDE ENVIRONMENTS**

- Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332  
 Psychophysiological studies of acute hypoxic hypoxia p 91 A93-18417  
 Energy expenditure climbing Mt. Everest p 92 A93-20031  
 Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042  
 Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043  
 High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709  
 Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177  
 Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans p 332 A93-44180  
 Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560  
 Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567  
 Hemodynamic effects of altitude exposure and oxygen administration in chronic obstructive pulmonary disease p 383 A93-49571  
 The Environmental Symptoms Questionnaire (ESQ): Development and application [AD-A264127] p 335 N93-30196  
**HIGH ALTITUDE TESTS**  
 Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165  
**HIGH ELECTRON MOBILITY TRANSISTORS**  
 Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 N93-15825  
 Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-193137] p 322 N93-28895  
**HIGH ENERGY ELECTRONS**  
 Utilization of high energy electron beam in the treatment of drinking and waste water [DE92-642335] p 372 N93-32406  
**HIGH GRAVITY ENVIRONMENTS**  
 Accuracy of aimed arm movements in changed gravity p 56 A93-16159  
 Reclined seating in advanced crewstations - Human performance considerations p 186 A93-27151  
 Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212  
 Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177

## SUBJECT INDEX

Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407

### HIGH PRESSURE

Motor activity of animals under elevated pressure p 75 A93-18290  
Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293  
Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure p 76 A93-18296  
Parameters of external breathing in an excess-pressure atmosphere p 76 A93-18298  
Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain p 77 A93-18300  
On a possible role of carbon dioxide in the genesis of the hyperbaric neural syndrome p 200 A93-31190  
Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m [DLR-FB-92-14] p 219 A93-24093  
Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 A93-30882

### HIGH RESISTANCE

The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034

### HIGH RESOLUTION

High-resolution inserts in wide-angle head-mounted stereoscopic displays p 408 A93-53121

### HIGH SPEED

Mathematics and biology: The interface, challenges and opportunities [DE92-041207] p 82 N93-17359

### HIGH TEMPERATURE ENVIRONMENTS

Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166  
Bacterial sulfate reduction above 100 °C in deep-sea hydrothermal vent sediments p 80 A93-20672  
Life in hot springs and hydrothermal vents p 243 A93-36559  
Deep-sea smokers - Windows to a subsurface biosphere? p 397 A93-53284  
Aqueous high-temperature and high-pressure organic geochemistry of hydrothermal vent systems p 397 A93-53285  
Hydrothermal dehydration of aqueous organic compounds p 397 A93-53291  
AFTERRISE: Deep body temperature following exercise [AD-A259887] p 218 N93-23984  
The effects of cockpit heat on aviator sleep parameters p 371 N93-32266

### HIGH TEMPERATURE FLUIDS

Deep-sea smokers - Windows to a subsurface biosphere? p 397 A93-53284  
Aqueous high-temperature and high-pressure organic geochemistry of hydrothermal vent systems p 397 A93-53285

### HIGHLY MANEUVERABLE AIRCRAFT

Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694

### HIPPOCAMPUS

Role of the central nervous system in the control of hybernation p 378 A93-51025  
Extrathalamic modulation of cortical function [AD-A255440] p 53 N93-14782  
Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 N93-30594

### HISTAMINES

Reaction characteristics of several neuroregulating systems of cosmonauts after a 366-day-long space flight p 45 A93-15167  
Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711  
The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034

### HISTIDINE

Neurochemical control of circadian rhythms [AD-A255054] p 50 N93-13116

### HISTOCHEMICAL ANALYSIS

Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse p 157 A93-28752  
Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity p 377 A93-49294

### HISTOLOGY

A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727  
Distinguishing unloading- versus reloading-induced changes in rat soleus muscle p 157 A93-28763

Mechanically induced alterations in cultured skeletal muscle growth p 202 A93-32749  
27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696

Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697

### HISTORIES

Aviation medicine research: A historical review [AD-A258198] p 121 N93-18217

### HOLES (MECHANICS)

Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment [NASA-TM-104767] p 234 N93-23129

### HOLOGRAPHY

A new concept for helmet mounted vision p 145 N93-19767

### HOMEOSTASIS

Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207  
The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257  
Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620

### HORIZON

Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display [AD-A264401] p 353 N93-30167

### HORMONE METABOLISMS

Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332  
Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685  
Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity p 168 A93-28736  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133

### HORMONES

Principles of the organization of calcium metabolism p 7 A93-10124  
Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203  
Melatonin in human preovulatory follicular fluid p 215 A93-32474  
Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030  
The pineal gland - Its possible roles in human reproduction p 204 A93-33036  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207  
Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495  
Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight p 272 A93-40548  
Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220  
Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221  
Molecular approach to hypothalamic rhythms [AD-A264438] p 335 N93-30421

### HORN ANTENNAS

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-193137] p 322 N93-28895

### HOSPITALS

Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment [FOA-A-40065-4.5] p 359 N93-32423

### HUMAN BEHAVIOR

Subjective and behavioral effects associated with repeated exposure to narcosis p 7 A93-10327  
Contribution of psychiatry to life in space p 56 A93-15529  
Psychiatric diagnoses aboard an aircraft carrier p 57 A93-16162  
K.E. Tsiolkovsky on individual time perception and some characteristics of intuitive perception of the properties of time at different levels of motor activity and health p 98 A93-18413

## HUMAN BODY

Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space p 130 A93-25207

Human Factors Society, Annual Meeting, 35th, San Francisco, CA, Sept. 2-6, 1991, Proceedings, Vols. 1 & 2 p 185 A93-27126

Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142  
Crew performance in Spacelab p 176 A93-27169  
Neurobehavioral test in civil aviation flight personnel p 223 A93-30443

Effects of their nutrient precursors on the synthesis and release of serotonin, the catecholamines, and acetylcholine - Implications for behavioral disorders p 204 A93-33033

Human behavior in virtual environments p 233 A93-33447

Psychophysiological principles of flight training for actions in nonroutine situations p 256 A93-35233  
Motion sickness susceptibility and behavior p 405 A93-55948

The locator system for wandering individuals [NASA-TM-104754] p 31 N93-11649

The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704

Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 N93-19709

Instructions and advance training measures for the improvement of human reliability [MBB-FE-313-S-PUB-0500] p 181 N93-21402

Why do we see three-dimensional objects? [AD-A259892] p 224 N93-23986

Method of encouraging attention by correlating video game difficulty with attention level [NASA-CASE-LAR-15022-1] p 288 N93-28128

Theory of signal detection and its application to visual target acquisition: A review of the literature [AD-A262920] p 288 N93-28307

Visualization techniques for analyzing control of human movement: Affine mappings between multi-dimensional spaces p 353 N93-30204

The clearance test: A computer generated process for acquisition of auditive short term sensitivity p 343 N93-31234

Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force p 369 N93-32255

### HUMAN BEINGS

Effect of hypoxic hypoxia on the immune response and some factors of nonspecific resistance of human and animal organisms p 325 A93-43074  
Human exposure to galactic cosmic rays in space p 410 A93-54887  
A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets [AD-A254247] p 13 N93-10709  
Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation [DE92-018066] p 5 N93-10974

Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302

Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 N93-12014

Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 N93-13327

Environmental health discipline science plan [NASA-TM-108042] p 173 N93-21369

Adaptive filters for monitoring localized brain activity from surface potential time series [DE93-003795] p 217 N93-22774

The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 N93-26082

Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133

Contribution of personality to the prediction of success in initial air traffic control specialist training [DOT/FAA/AM-93/4] p 259 N93-26138

Comparative mutagenesis of human cells in vivo and in vitro [DE93-012269] p 276 N93-28651

Sudden loading and fatigue effects on the human spine [PB93-167526] p 286 N93-29199

### HUMAN BODY

Development of K.E. Tsiolkovsky's ideas on the interaction between space, nature, and man p 90 A93-18408

The problem of oxygen regimen in extreme conditions p 160 A93-27685

Human-like agents with posture planning ability p 192 A93-29118



- Atomic structure and chemistry of human serum albumin p 200 A93-31628
- New techniques for positron emission tomography in the study of human neurological disorders [DE92-015353] p 23 N93-11873
- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 N93-12211
- Studies of a laser/nuclear thermal hardened body armor [AD-A255128] p 34 N93-12423
- Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 N93-13327
- Body composition and physical performance [AD-A255627] p 69 N93-14161
- Modeling clothed figures [AD-A257037] p 71 N93-15363
- A review of models of the human temperature regulation system [AD-A258023] p 120 N93-17918
- Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664
- Design/development of an enhanced biodynamic manikin p 142 N93-19667
- Improving manikin biofidelity p 142 N93-19668
- The design and use of automotive crash test dummies p 142 N93-19669
- A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672
- Initial experiments with a myoelectric-based muscle sensor [DE92-016034] p 237 N93-25099
- Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988 [AD-A260869] p 265 N93-25628
- Visual perception of elevation [AD-A261394] p 259 N93-26307
- Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 N93-32237
- HUMAN CENTRIFUGES**
- Development of a tactile perceived attitude transducer [AD-A253724] p 25 N93-11081
- Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458
- HUMAN FACTORS ENGINEERING**
- Human factors in the 'glass cockpit' p 27 A93-11202
- Human support for Mars exploration - Issues and approaches p 27 A93-12077
- Smart space suits for space exploration p 28 A93-12078
- Human factors on advanced flight decks; Proceedings of the Conference, London, United Kingdom, Mar. 14, 1991 [ISBN 0-903409-85-2] p 29 A93-13408
- C.R.M. training for the advanced flight deck p 24 A93-13410
- Relationship between ERP and workload in manual control p 30 A93-13721
- Human factors in design of military aircrafts' oxygen supply equipment p 60 A93-14222
- Study of overall analysis method of the man-machine-environment systems p 61 A93-14413
- K.E. Tsolokovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409
- Methodology for ergonomic tests of the information display on monitor indicators p 101 A93-18530
- Ergonomic aspects of the presentation of piloting-navigation information p 101 A93-18531
- Graphical displays - Implications for divided attention, focused attention, and problem solving p 102 A93-19984
- Individual differences and subgroups within populations - The shopping bag approach p 136 A93-24050
- Human Factors Society, Annual Meeting, 35th, San Francisco, CA, Sept. 2-6, 1991, Proceedings, Vols. 1 & 2 p 185 A93-27126
- Automation, authority and angst - Revisited p 185 A93-27127
- Individual pilot differences related to situation awareness p 175 A93-27137
- A systems analysis to identify human factors issues and requirements for data link p 186 A93-27153
- Selecting Space Station Freedom hardware p 188 A93-27184
- Human factors issues in the use of night vision devices p 189 A93-27193
- S-R compatibility effects with orthogonal stimulus and response dimensions p 179 A93-27194
- Helmet-mounted displays III; Proceedings of the Meeting, Orlando, FL, Apr. 21, 22, 1992 [SPIE-1695] p 227 A93-30051
- The realities of using visually coupled systems for training applications p 228 A93-30063
- Compatibility and consistency in display-control systems - Implications for aircraft decision aid design p 230 A93-30454
- Human factor considerations for the First Lunar Outpost [AIAA PAPER 93-1014] p 223 A93-30928
- Military aircrew head support system p 231 A93-31944
- Human factors problems for aircrew-aircraft interfaces - Where should we focus our efforts? p 264 A93-37300
- Operational space human factors - Methodology for a DSO --- Detailed Supplementary Objective for manned Shuttle Orbiter missions [SAE PAPER 921156] p 293 A93-41339
- Development of the Hermes EVA Space Suit Glove [SAE PAPER 921256] p 299 A93-41426
- Development of a 500 hPa shoulder joint for the European EVA Space Suit System [SAE PAPER 921257] p 299 A93-41427
- Human habitat design for the Space Exploration Initiative p 344 A93-41978
- Lunar base requirements for human habitability p 345 A93-41995
- The psychological challenge of space p 339 A93-42658
- Human performance data visualization for system design teams p 348 A93-42840
- Computer-supported collaborative work - A new agenda for human factors engineering p 348 A93-42841
- An evaluation of miniaturized aircraft keyboards p 348 A93-42844
- 'Liveware' survey of human systems integration (HSI) tools p 349 A93-42847
- CSEIRAC case studies in ergonomics information analysis --- for crew systems p 349 A93-42850
- Evaluation of speech technology for enhancing performance of man-machine systems p 350 A93-44846
- Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895
- A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object p 364 A93-45685
- Distribution of functions in a man-machine control system of a certain type p 364 A93-45687
- Flight mechanics of high-performance aircraft [ISBN 0-521-34123-X] p 365 A93-47019
- Profile analysis of simulator sickness symptoms - Application to virtual environment systems p 381 A93-49399
- High level organizing principles for display of systems fault information for commercial flight crews p 388 A93-52187
- Modeling strategic behavior in human-automation interaction - Why an 'aid' can (and should) go unused p 394 A93-52502
- Cockpit checklists - Concepts, design, and use p 389 A93-52506
- The limits of human impact acceleration tolerance [AIAA PAPER 93-3572] p 400 A93-52692
- Human factors with nonhumans - Factors that affect computer-task performance p 404 A93-52721
- Human factors evaluation of the HL-20 full-scale model p 409 A93-53746
- Human factors applications in control systems design for ground testing of turbine engines p 409 A93-54410
- Virtual landings --- developing Enhanced Vision Systems for VFR p 410 A93-54868
- Human engineering issues for data link systems [SAE ARD 50027] p 410 A93-54874
- Review of the space, medico-engineering research in China [AAS PAPER 91-623] p 402 A93-55802
- Motion and human performance p 406 A93-55949
- KC-135 crew reduction feasibility demonstration simulation study, Volume 3: Test and evaluation [AD-A253931] p 30 N93-10713
- NASA Space Human Factors Program [NASA-TM-108005] p 31 N93-10890
- Coordinated action in 3-D space [AD-A249830] p 31 N93-10994
- The effect of variable seat back angles on human response to +Gz impact accelerations p 31 N93-11559
- System for generating dynamic video imagery for human factors research [AD-A248675] p 31 N93-11743
- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions [AD-A252820] p 26 N93-11779
- Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 N93-11784
- Evaluation of multilayer mask concept for RESPO 21 [AD-A253392] p 33 N93-12079
- Human performance in complex task environments: A basis for the application of adaptive automation [AD-A255067] p 35 N93-12486
- Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interfaces [AD-A254493] p 63 N93-12576
- Human factors research in aircrew performance and training: 1986-1991 [AD-A254455] p 63 N93-12609
- Human perceptual deficits as factors in computer interface test and evaluation [DE92-019124] p 63 N93-12712
- Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts [AD-A254381] p 64 N93-12860
- Occupational ergonomics in space p 68 N93-14013
- Institute for the Study of Human Capabilities [AD-A256091] p 69 N93-14427
- A voyage to Mars: A challenge to collaboration between man and machines p 70 N93-14614
- Compliant walker [NASA-CASE-GSC-13348-2] p 53 N93-14708
- Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 N93-15968
- Gloved operator performance study [AD-A256894] p 104 N93-16048
- Directory of design support methods [AD-A256987] p 104 N93-16258
- Cognitive and affective components of mental workload: Understanding the effects of each on human decision making behavior p 99 N93-16783
- Long-duration isolation and confinement: Human factors issues and research requirements p 100 N93-16808
- Portable seat lift [NASA-CASE-MFS-28610-1] p 106 N93-17045
- Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 N93-18156
- Cognitive engineering models in space systems [NASA-CR-192001] p 141 N93-18517
- Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104
- Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660
- Occupant simulation as an aspect of flight safety research p 142 N93-19665
- Computer aided methods for simulating occupant response to impact using OASYS DYNA3D p 142 N93-19666
- Design/development of an enhanced biodynamic manikin p 142 N93-19667
- Improving manikin biofidelity p 142 N93-19668
- The design and use of automotive crash test dummies p 142 N93-19669
- An improved anthropometric test device p 143 N93-19670
- The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671
- A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672
- Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991 p 133 N93-19679
- Disorientation and flight safety: A survey of UK Army aircrew p 133 N93-19680
- Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681
- Cognitive factors in the air events of the Air Force during the last decade p 134 N93-19682
- Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 N93-19683
- Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 N93-19709
- Advanced Aircraft Interfaces: The Machine Side of the Man-Machine Interface [AGARD-CP-521] p 144 N93-19757
- Engineering the visibility of small features on electronic flight displays p 144 N93-19758
- Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 N93-19759
- Advanced cockpit-mission and image management p 144 N93-19760

## SUBJECT INDEX

## HUMAN PERFORMANCE

- Aircrew acceptance of automation in the cockpit p 144 N93-19761
- Time stress measurement devices for enhancement of onboard bit performance p 144 N93-19762
- Developing virtual cockpits p 145 N93-19764
- Panoramic cockpit displays p 145 N93-19765
- A new concept for helmet mounted vision p 145 N93-19767
- The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769
- Multi-function visor p 146 N93-19770
- The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft p 146 N93-19772
- Multimodal dialog system for future cockpits p 146 N93-19773
- Principles for integrating voice I/O in a complex interface p 146 N93-19774
- A systems approach to the advanced aircraft man-machine interface p 146 N93-19776
- Management of avionics data in the cockpit p 147 N93-19777
- Model-based reasoning applied to cockpit warning systems p 147 N93-19778
- The integration of advanced cockpit and systems design p 147 N93-19779
- CVA, cockpit design and development tool p 147 N93-19780
- Man-machine interface with simulated automatic target recognition systems p 147 N93-19781
- Equipment, more or less ready to be used in helicopters p 148 N93-19785
- Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition [NASA-TP-3297] p 149 N93-20319
- Space human factors discipline science plan [NASA-TM-108023] p 194 N93-21370
- Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool [AD-A258531] p 195 N93-21753
- Operator Performance Support System (OPSS) p 196 N93-22195
- Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment [NASA-TM-104767] p 234 N93-23129
- The effects of display and response codes on information processing in an identification task [AD-A259531] p 234 N93-23451
- Human Factors Issues in Aircraft Maintenance and Inspection. Science, technology, and management: A program review [PB93-146975] p 234 N93-23647
- Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data [AD-A259684] p 234 N93-23660
- An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128
- Attitude awareness enhancements for the F-16 head-up display [AD-A260280] p 236 N93-24168
- Initial experiments with a myoelectric-based muscle sensor [DE92-016034] p 237 N93-25099
- A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment [DE93-007428] p 264 N93-25318
- Human factors engineering: A key element of instrumentation and control system design [DE93-006731] p 264 N93-25415
- Helmeted head and neck dynamics under whole-body vibration p 264 N93-25531
- Measures of user-system interface effectiveness: An encoding scheme and indicators for assessing the usability of graphical, direct-manipulation style user interfaces [AD-A260606] p 265 N93-25840
- Human Factors in Aviation Maintenance, phase 2 [DOT/FAA/AM-93/5] p 267 N93-26089
- Comparison of portable crewmember protective breathing equipment (CPBE) designs [DOT/FAA/AM-93/6] p 310 N93-27121
- Man-systems distributed system for Space Station Freedom p 312 N93-27788
- EVA/manned systems p 312 N93-27789
- Evolution of Space Station EMU PLSS technology recommendations p 312 N93-27790
- Evolving EVA system capability for the evolving Space Station Freedom requirements p 312 N93-27791
- EVA and telerobot interaction p 312 N93-27792
- Evolving technologies for Space Station Freedom computer-based workstations p 313 N93-27794
- Man-systems integration and the man-machine interface p 313 N93-27795
- Manned systems technology discipline p 314 N93-27860
- Specification of adaptive aiding systems [AD-A263071] p 314 N93-27927
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 N93-28850
- The design and development of the new RAF standard HUD format p 318 N93-28856
- Operator and automation capability analysis: Picking the right team p 319 N93-28864
- Ergonomic development of digital map displays p 320 N93-28866
- System automation and pilot-vehicle-interface for unconstrained low-altitude, night attack p 320 N93-28867
- Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA [DE93-001923] p 321 N93-28942
- NASA supporting studies for microgravity research on eye movements [NASA-CR-193233] p 285 N93-29041
- Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system [NASA-TM-104769] p 321 N93-29044
- Exercise/recreation facility for a lunar or Mars analog p 352 N93-29733
- Mars habitat p 352 N93-29747
- Selenia: A habitability study for the development of a third generation lunar base p 352 N93-29748
- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 N93-29888
- Handedness and motor programming effects of manual control and movement [AD-A264022] p 340 N93-30027
- Discomfort glare from high-intensity discharge headlamps: Effects of context and experience [PB93-174720] p 336 N93-30659
- Probabilistic simulation of the human factor in structural reliability p 365 N93-31573
- Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267
- Health maintenance facility system effectiveness testing [NASA-TM-104737] p 372 N93-32328
- HUMAN FACTORS LABORATORIES**
- Columbus payload requirements in human physiology p 220 N93-24386
- A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848
- HUMAN IMMUNODEFICIENCY VIRUS**
- Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus p 130 N93-25209
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type p 153 N93-28698
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 N93-32850
- HIV infection in the nineties p 15 N93-11290
- AIDS/HIV in the US Military p 16 N93-11291
- Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292
- Silent HIV infection p 16 N93-11293
- HIV variability and perspectives of a vaccine p 16 N93-11294
- Immunological parameters in current and former US Air Force personnel p 16 N93-11295
- Early markers of HIV infection and subclinical disease progression p 17 N93-11296
- Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297
- Relating cognitive function to military aviator performance in early HIV infection p 17 N93-11298
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 N93-11299
- Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients [NASA-CR-192382] p 172 N93-20736
- HUMAN PATHOLOGY**
- Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots p 91 A93-18416
- The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649
- Retts syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697
- Wall shear stress estimates in coronary artery constrictions p 170 A93-28759
- Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781
- Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226
- Barotrauma in Boeing 737 cabin crew p 278 A93-39706
- Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 N93-11283
- Growth factor involvement in tension-induced skeletal muscle growth [NASA-CR-193023] p 282 N93-27113
- HUMAN PERFORMANCE**
- Subjective and behavioral effects associated with repeated exposure to narcosis p 7 A93-10327
- Thermal convergence fails to predict heat tolerance limits p 8 A93-10331
- Documentation of activity and rest of a U.S. National Guard attack helicopter battalion p 9 A93-10338
- A software for testing human's ability to trouble-shoot in the condition of multitask p 29 A93-13537
- Locus of the single-channel bottleneck in dual-task interference p 55 A93-14098
- The effects of hypoxia on auditory reaction time and P300 latency p 47 A93-16156
- Crew factors --- and their psychological problems in long term space flight p 57 A93-17431
- Decrement in manual arm performance during whole body cooling p 88 A93-18038
- Effects of + Gy stress on human body p 92 A93-19997
- Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870
- Human visual performance model for crewstation design p 182 A93-26887
- Human Factors Society, Annual Meeting, 35th, San Francisco, CA, Sept. 2-6, 1991, Proceedings. Vols. 1 & 2 p 185 A93-27126
- Reclined seating in advanced crewstations - Human performance considerations p 186 A93-27151
- Effects of error-proofing and chemical/biological/radiation protective glove use on touch panel operation p 186 A93-27152
- Crew performance in Spacelab p 176 A93-27169
- Movement tracking performance as a function of required force level p 177 A93-27171
- Individual differences in airline captains' personalities, communication strategies, and crew performance p 177 A93-27175
- S-R compatibility effects with orthogonal stimulus and response dimensions p 179 A93-27194
- Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy p 211 A93-30278
- The effect of wearing protective chemical warfare combat clothing on human performance p 230 A93-30287
- Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443
- Visual search in virtual environments p 233 A93-33450
- The role of mental models in team performance in complex systems p 262 A93-34985
- Performance consequences of automation-induced 'complacency' p 286 A93-39571
- Structured interviews for pilot selection - No incremental validity p 286 A93-39572
- Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704
- Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks p 287 A93-41166
- Identification of hazardous awareness states in monitoring environments [SAE PAPER 921136] p 287 A93-41324
- An analysis of human performance in simulated partial-gravity environments p 347 A93-42173
- The psychological challenge of space p 339 A93-42658
- Human performance data visualization for system design teams 'Liveware' survey of human systems integration (HSI) tools p 349 A93-42847
- The effects of field of view size on the control of roll motion p 349 A93-43722
- A method for predicting the work load of a flight engineer engaged in counteracting failures of functional systems of a transport aircraft p 364 A93-45688

- Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49218
- Continuous vs. intermittent work with Canadian forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49219
- Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221
- Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 A93-51959
- Disruption and maintenance of skilled visual search as a function of degree of consistency p 389 A93-52501
- Cognitive function at high altitude p 386 A93-52505
- Human factors with nonhumans - Factors that affect computer-task performance p 404 A93-52721
- 3-D target designation using two control devices and an aiding technique --- in fighter cockpits p 408 A93-53120
- Meeting human needs [AAS PAPER 91-313] p 400 A93-54306
- Motion and space sickness [ISBN 0-8493-4703-3] p 402 A93-55929
- The accelerative stimulus for motion sickness p 410 A93-55938
- Motion and human performance p 406 A93-55949
- Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses [AD-A254129] p 13 A93-10661
- NASA Space Human Factors Program [NASA-TM-108005] p 31 A93-10890
- Development of a tactile perceived attitude transducer [AD-A253724] p 25 A93-11081
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 A93-11299
- System for generating dynamic video imagery for human factors research [AD-A248675] p 31 A93-11743
- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions [AD-A252820] p 26 A93-11779
- Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 A93-11784
- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables [AD-A254681] p 27 A93-12225
- The OMPAT level 1 Neuropsychological Performance Assessment Battery: NPPAB [AD-A254840] p 27 A93-12432
- Human performance in complex task environments: A basis for the application of adaptive automation [AD-A255067] p 35 A93-12486
- The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 A93-12491
- An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 A93-12509
- Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts [AD-A254381] p 64 A93-12860
- Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 A93-12960
- Body composition and physical performance [AD-A255627] p 69 A93-14161
- Sleep inertia: Is there a worst time to wake up? [AD-A256602] p 52 A93-14240
- Institute for the Study of Human Capabilities [AD-A256091] p 69 A93-14427
- Decision making in a dynamic task environment: The effect of time pressure [AD-A256557] p 58 A93-14602
- The effect of pain on task performance: A review of the literature [AD-A254336] p 59 A93-15216
- Night vision manual for the flight surgeon [AD-A257059] p 104 A93-15710
- Development and enhancement of a model of performance and decision making under stress in a real life setting [AD-A255699] p 99 A93-16111
- NASA/NSF Workshop on Antarctic Research p 81 A93-16803
- Infectious disease p 81 A93-16804
- Exercise during long term exposure to space: Value of exercise during space exploration p 82 A93-16807
- Bright light delivery system [NASA-CASE-MFS-28723-1] p 96 A93-17058
- Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks [AD-A257711] p 100 A93-17684
- Enhanced performance using physiological feedback [AD-A258006] p 130 A93-17816
- The detection of lateral motion by US Navy jet pilots [AD-A258115] p 120 A93-17896
- Comparing performance on implicit memory tests [AD-A258168] p 131 A93-17921
- Spatio-temporal masking: Hyperacuity and local adaptation [AD-A257934] p 121 A93-18006
- Dual-task training strategies and aging [AD-A258261] p 131 A93-18027
- Design requirements for force reflecting master controllers p 139 A93-18035
- Cognitive engineering models in space systems [NASA-CR-192001] p 141 A93-18517
- Human performance assessment methods [AGARD-AG-308-ADD] p 133 A93-18868
- The effects of iconic presentation on individuals [AD-A258785] p 133 A93-18949
- Effect of contrast on human speed perception [NASA-TM-103898] p 141 A93-19104
- Stimulus presentation formats and measurement techniques for the quantification of target detection performance [AD-A258933] p 133 A93-19449
- Cognitive factors in the air events of the Air Force during the last decade p 134 A93-19682
- Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 A93-19683
- The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 A93-19705
- Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 A93-19759
- Modeling the dynamics of mental workload and human performance in complex systems [AD-A258553] p 135 A93-19956
- Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition [NASA-TP-3297] p 149 A93-20319
- Acquisition and production of skilled behavior in dynamic decision-making tasks [NASA-CR-192361] p 181 A93-20908
- Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool [AD-A258531] p 195 A93-21753
- Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data [AD-A259684] p 234 A93-23660
- Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 A93-24021
- Perception/action: An holistic approach [AD-A259597] p 235 A93-24067
- Training high performance skills using above real-time training [NASA-CR-192616] p 225 A93-24192
- The five-factor personality model and naval aviation candidates [AD-A260227] p 225 A93-24319
- Telescence testbedding for physiological experiments under hypobaric hypoxic conditions p 220 A93-24398
- An automated method for determining mass properties [AD-A259924] p 236 A93-24441
- A longitudinal examination of applicants to the air traffic control supervisory identification and development program [DOT/FAA/AM-92/16] p 257 A93-25213
- A cognitive architecture for human performance process model research [AD-A261040] p 258 A93-25815
- Simulated sustained flight operations and performance. Part 1: Effects of fatigue [AD-A261012] p 266 A93-25859
- Investigation of the effects of Extra Vehicular Activity (EVA) and Launch and Entry (LES) gloves on performance p 266 A93-26061
- Contribution of personality to the prediction of success in initial air traffic control specialist training [DOT/FAA/AM-93/4] p 259 A93-26138
- Automation and robotics human performance [NASA-CR-193049] p 267 A93-26153
- How expert pilots think: Cognitive processes in expert decision making [DOT/FAA/RD-93/9] p 288 A93-27103
- Method of encouraging attention by correlating video game difficulty with attention level [NASA-CASE-1AR-15022-1] p 288 A93-28128
- Human capabilities and limitations in situation awareness p 319 A93-28863
- Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA [DE93-001923] p 321 A93-28942
- The dynamics of visual representation, attention, encoding, and retrieval processes [AD-A264674] p 342 A93-30543
- Determinants of performance rating accuracy: A field study [AD-A264726] p 342 A93-30575
- Probabilistic simulation of the human factor in structural reliability p 365 A93-31573
- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools [AD-A264571] p 363 A93-32011
- A decision-theoretic approach to the display of information for time-critical decisions: The Vista project p 367 A93-32152

## HUMAN REACTIONS

- Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286
- Physical fitness as a criterion of readiness for spaceflights p 98 A93-18412
- Consequences of a basic model of external-information perception p 98 A93-18414
- Psychophysiological studies of acute hypoxic hypoxia p 91 A93-18417
- HUD climb/dive ladder configuration and unusual attitude recovery p 185 A93-27129
- Individual pilot differences related to situation awareness p 175 A93-27137
- Insights into pilot situation awareness using verbal protocol analysis p 175 A93-27138
- Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation --- Task Load Index p 175 A93-27139
- Response to automated function failure cue - An operational measure of complacency p 176 A93-27147
- Response characteristics of the human torsional vestibuloocular reflex p 215 A93-32774
- Modeling human response errors in synthetic flight simulator domain p 141 A93-19464
- Occupant simulation as an aspect of flight safety research p 142 A93-19665
- Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 A93-19759
- Armstrong Laboratory space visual function tester program p 284 A93-28739

## HUMAN RELATIONS

- Adaptation of young pilots to new conditions of their work (Social-psychological aspects) p 256 A93-35220

## HUMAN RESOURCES

- Diversity in biological research [NSF-92-19] p 42 A93-13700

## HUMAN TOLERANCES

- A study of human brain somatosensory evoked potential and its application to man-machine-environment system engineering - Preliminary exploration of SEP in normal adult p 12 A93-13719
- Free radical attack - Biological test for human resistance capability p 39 A93-17434
- Windblast tolerance of human thorax and abdomen p 91 A93-19992

- Informative value of the rerespiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors p 248 A93-35222

- Effect of aerobic capacity on Lower Body Negative Pressure (LBPN) tolerance in females [NASA-TP-3298] p 128 A93-20318

- Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 A93-24021

- Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 A93-29651

## HUMAN WASTES

- Bioregenerative life support as self-sustaining ecosystem in space p 231 A93-32073
- Concept of waste transferring mechanisms [SAE PAPER 921239] p 297 A93-41412
- Test of the Shuttle Extended Duration Orbiter (EDO) Waste Collection Subsystem (WCS) [SAE PAPER 921346] p 305 A93-41505
- Development of a pyrolysis waste recovery model with designs, test plans, and applications for space-based habitats p 267 A93-26076

**HUMIDITY**

Experimental research of the temperature and humidity control system for manned spacecraft cabin

p 10 A93-13529

Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots

p 167 A93-28729

Use of sorption technology for treatment of humidity condensate for potable water

[SAE PAPER 921312] p 303 A93-41474

Space Station Condensing Heat Exchanger biofilm formation and control evaluation

[SAE PAPER 921383] p 308 A93-41541

Methods development for total organic carbon accountability

[NASA-CR-184438] p 40 A93-12949

Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits

[AD-A262862] p 350 A93-29471

**HUMIDITY MEASUREMENT**

Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package

[SAE PAPER 921122] p 291 A93-41314

**HYDRATION**

Changes in body fluid compartments during hypohydration and rehydration in heat-acclimated tropical subjects

p 251 A93-35496

Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario

[AD-A258744] p 128 A93-20384

Comparison of total body water estimates from O-18 and bioelectrical response prediction equations

[NASA-TP-3299] p 218 A93-23734

**HYDRAULIC EQUIPMENT**

An update on the readiness of vapor compression distillation for spacecraft wastewater processing

[SAE PAPER 921114] p 290 A93-41307

**HYDROCYANIC ACID**

An efficient lightning energy source on the early earth

p 73 A93-17823

Dark matter in the solar system - Hydrogen cyanide polymers

p 110 A93-17987

Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations

[DOT/FAA/AM-93/8] p 283 A93-27158

**HYDROGEN**

Photo and thermal reactions of ferrous hydroxide --- formation of hydrogen in Archaean ocean relevant to chemical origin of life

p 269 A93-36561

**HYDROGEN BONDS**

Liquid water and the origin of life

p 268 A93-36552

**HYDROGEN SULFIDE**

Biological conversion of synthesis gas culture development

[DE92-001279] p 6 A93-12482

Biological conversion of synthesis gas

[DE92-017673] p 40 A93-13269

**HYDROLYSIS**

Kinetics of peptide hydrolysis and amino acid decomposition at high temperature --- space biochemical evolution

p 411 A93-53289

**HYDROPONICS**

Two phase fluid management for hydroponics

[SAE PAPER 921163] p 294 A93-41345

Characterization of the water soluble component of inedible residue from candidate CELSS crops

[NASA-TM-107557] p 139 A93-18111

**HYDROTHERMAL SYSTEMS**

Why are hydrothermal systems proposed as plausible environments for the origin of life?

p 73 A93-18001

Hydrothermal systems - Their varieties, dynamics, and suitability for prebiotic chemistry

p 73 A93-18002

Chemical environments of submarine hydrothermal systems --- supporting abiogenetic theory

p 74 A93-18005

Chemical markers of prebiotic chemistry in hydrothermal systems

p 74 A93-18006

Hydrothermal organic synthesis experiments

p 74 A93-18007

An experimental approach to chemical evolution in submarine hydrothermal systems

p 74 A93-18008

Future research --- abiogenesis in hydrothermal systems

p 74 A93-18010

Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars

p 197 A93-28377

Hydrothermal organic synthesis experiments

[NASA-CR-191257] p 41 A93-13457

**HYDROXIDES**

Photo and thermal reactions of ferrous hydroxide --- formation of hydrogen in Archaean ocean relevant to chemical origin of life

p 269 A93-36561

The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs

p 325 A93-43795

**HYGIENE**

Skin care in the space environment

p 170 A93-28756

Control of infection in an international airline

p 407 A93-52867

**HYOSCINE**

Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility

p 116 A93-24037

Effect of transdermally administered scopolamine on the vestibular system in humans

p 383 A93-49572

Pharmacological countermeasures against motion sickness

p 404 A93-55945

**HYPERBARIC CHAMBERS**

The role of ground level oxygen in the treatment of altitude chamber decompression sickness

p 89 A93-18043

Electromyographic investigations of tremor in aquanauts in simulated immersions

p 90 A93-18292

Maximal lung ventilation and forced expiration rate under hyperbaria

p 76 A93-18297

Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation

p 77 A93-18301

Rationale for a hyperbaric treatment capability at a Lunar Station

p 213 A93-30286

New aspects of using hyperbaric oxygenation in aviation medicine

p 252 A93-36742

Hyperbaric treatment operations aboard Space Station Freedom

[SAE PAPER 921142] p 292 A93-41328

The psychological challenge of space

p 339 A93-42658

The Proceedings of the Hypobaric Decompression Sickness Workshop

[AD-A257612] p 123 A93-18362

**HYPERCAPNIA**

Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity

p 92 A93-20028

Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations

p 249 A93-35244

**HYPERGLYCEMIA**

Effects of sleep deprivation and exercise on glucose tolerance

p 281 A93-41165

**HYPERKINESIA**

Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics

p 216 A93-32781

**HYPEROXIA**

Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia

p 76 A93-18295

Time course of functional repair of the alveolar epithelium after hyperoxic injury

p 78 A93-20032

Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia

p 169 A93-28751

**HYPERTENSION**

Heart and lung alterations in neonatal rats exposed to CO or high altitude

p 77 A93-20027

Retropertoneal fibrosis as a cause of hypertension in an aviator - A case report

p 212 A93-30284

Hypertension and the probability of an incapacitating event over a defined period - Impact of treatment

p 215 A93-32777

Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m

p 280 A93-41121

Acute hypertensive response to +Gz acceleration in mildly hypertensive pilots

p 386 A93-52307

The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident

[AD-A254550] p 49 A93-12612

Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin

[AD-A258185] p 120 A93-17900

**HYPERTHERMIA**

Influence of graded dehydration on hyperthermia and cardiovascular drift during exercise

p 44 A93-14971

Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis

p 39 A93-16750

Effect of heat acclimatization on cAMP level in plasma, cerebrospinal fluid and preoptic area-hypothalamus in hyperthermal rabbits

p 199 A93-30437

Tissue-specific noradrenergic activity during acute heat stress in rats

p 323 A93-42193

The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions

p 324 A93-43034

Continuous vs. intermittent work with Canadian forces NBC clothing --- nuclear, biological, and chemical assault protective garments

p 389 A93-49219

**HYPERVELOCITY IMPACT**

Comet impacts and chemical evolution on the bombarded earth

p 109 A93-17980

**HYPERVENTILATION**

Determinants of poststimulus potentiation in humans during NREM sleep

p 78 A93-20034

Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs

p 79 A93-20037

**HYPERVOLEMIA**

Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men

[NASA-TM-103949] p 6 A93-12014

**HYPOBARIC ATMOSPHERES**

Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I

p 37 A93-15526

Failure of the straight-line DCS boundary when extrapolated to the hypobaric realm

p 47 A93-16154

Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines

p 280 A93-41123

Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine

p 402 A93-55332

**HYPODYNAMIA**

Autoretic formation in the peripheral blood of people with lengthy limitations of motor activity

p 250 A93-35245

**HYPOGLYCEMIA**

Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men

p 92 A93-20029

Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school

p 368 A93-32248

**HYPOKINESIA**

Hypokinesia and weightlessness: Clinical and physiologic aspects --- Book

[ISBN 0-8236-2415-3] p 87 A93-17897

Physical fitness as a criterion of readiness for spaceflights

p 98 A93-18412

Effect of prolonged antihypertensive bed rest hypokinesia on functional properties of the neuromuscular system in humans

p 116 A93-23151

Formation of the hypokinetic syndrome in the digestive system under conditions of weightlessness

p 119 A93-25600

Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse

p 157 A93-28752

Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypertensive hypokinesia

p 170 A93-28760

Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity

p 240 A93-35224

Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy

p 248 A93-35228

Vestibulo-oculomotor responses under conditions of immersion hypokinesia

p 251 A93-35256

Hemodynamics in monkeys during antihypertensive hypokinesia at angles of -6 and -20 deg

p 241 A93-35259

Myosin and troponin changes in rat soleus muscle after hindlimb suspension

p 273 A93-41124

Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue

p 378 A93-51101

Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats

p 398 A93-55329

Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females

[NASA-TP-3298] p 128 A93-20318

Issues on human acceleration tolerance after long-duration space flights

[NASA-TM-104753] p 334 A93-29651

Protein requirements in hypoxia or hypokinesia

p 368 A93-32244

**HYPOTENSION**

Posture and the circulation - The age effect

p 93 A93-20653

Increased orthostatic blood pressure variability after prolonged head-down tilt

p 161 A93-28676

Influence of ten-day head-down bedrest on human carotid baroreceptor-cardiac reflex function

p 161 A93-28678

Effects of head-down tilt for 10 days on the compliance of the leg

p 162 A93-28680

Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics

p 216 A93-32781

Alanine increases blood pressure during hypotension

p 203 A93-33027

## HYPOTHALAMUS

### HYPOTHALAMUS

- Tryptophan availability modulates serotonin release from rat hypothalamic slices p 152 A93-27000
- Effect of chronic D-fenfluramine administration on rat hypothalamic serotonin levels and release p 152 A93-27049
- Serotonin release varies with brain tryptophan levels p 201 A93-32119
- Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028
- Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- Role of the central nervous system in the control of hibernation p 378 A93-51025
- Neurochemical control of circadian rhythms [AD-A255054] p 50 N93-13116
- Control and circadian behavior by transplanted suprachiasmatic nuclei [AD-A264553] p 335 N93-30382
- Molecular approach to hypothalamic rhythms [AD-A264438] p 335 N93-30421
- Melatonin, the pineal gland, and circadian rhythms [AD-A264099] p 337 N93-31061
- Organization of the human circadian system [AD-A264675] p 361 N93-32015

### HYPOTHERMIA

- A second postcooling afterdrop - More evidence for a convective mechanism p 44 A93-14969
- The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172
- Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients p 88 A93-18036
- Comparison of four noninvasive rewarming methods for mild hypothermia p 88 A93-18037
- Effect of task complexity on mental performance during immersion hypothermia p 211 A93-30279
- Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia [AD-A255120] p 34 N93-12291

### HYPOTHESES

- Handedness and motor programming effects of manual control and movement [AD-A264022] p 340 N93-30027

### HYPOXEMIA

- Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332
- Potential hazards of high anti-Gz suit protection p 48 A93-16164

### HYPOXIA

- The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860
- Effects of oxygen on regulation of cerebral blood flow in rabbits adapted to hypoxia p 3 A93-13545
- The evaluation of tolerance to serious acute hypoxia in humans p 11 A93-13715
- Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 A93-14973
- Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 A93-15526
- The effects of hypoxia on auditory reaction time and P300 latency p 47 A93-16156
- The effects of chronic hypoxia on human auditory system sensitivity p 89 A93-18041
- The efficiency of a prophylactic-rehabilitational treatment of civil-aviation flight crews p 91 A93-18415
- Psychophysiological studies of acute hypoxic hypoxia p 91 A93-18417
- Dynamic characteristic of changes of oxygen saturation of blood hemoglobin under conditions of acute hypoxia in human body p 91 A93-19993
- Heart and lung alterations in neonatal rats exposed to CO or high altitude p 77 A93-20027
- Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028
- Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030
- Determinants of poststimulus potentiation in humans during NREM sleep p 78 A93-20034
- Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035
- Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs p 79 A93-20037
- Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia p 79 A93-20038
- Protein absorption and energy digestibility at high altitude p 115 A93-21683

- Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043
- Self-organizing character of alpha wave in EEG due to acute hypoxic hypoxia in normal subjects p 213 A93-30436

- Effect of acute hypoxia exposures on plasma endothelin in rats p 199 A93-30442
- Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244
- Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494
- Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120
- Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121
- Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrophils, natural killer cells, and cytokines p 280 A93-41123
- Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186
- Effect of chronic hypoxia on hypoxic ventilatory response in awake rats p 323 A93-42187
- Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188
- Cognitive performance and event-related brain potentials under simulated high altitudes p 331 A93-42189
- Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191

- The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034

- Effect of adaptation to hypoxia on the contractile activity of fast and slow muscles in the rat p 324 A93-43035
- Mechanisms of the antihypoxic effect of taurine p 325 A93-43073

- Effect of hypoxic hypoxia on the immune response and some factors of nonspecific resistance of human and animal organisms p 325 A93-43074

- Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177
- Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans p 332 A93-44180

- Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude p 326 A93-44181

- Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560
- Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567

- Hemodynamic effects of altitude exposure and oxygen administration in chronic obstructive pulmonary disease p 383 A93-49571

- Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115

- Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116

- Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine p 402 A93-55332

- Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333

- Metabolic factors influencing myocardial recovery from acidosis (CIC3) [AD-A252376] p 14 N93-10796

- Nifedipine for treatment of high altitude pulmonary edema [AD-A256959] p 95 N93-16187

- Protein requirements in hypoxia or hypokinesia p 368 N93-32244

### IDENTIFYING

- A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321

- A longitudinal examination of applicants to the air traffic control supervisory identification and development program [DOT/FAA/AM-92/16] p 257 N93-25213

### IGNITION

- Protective helmet assembly [NASA-CASE-MS-C-21842-1] p 106 N93-17088

### ILLUMINATING

- Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990
- Air Traffic Control facility lighting p 188 A93-27167

- Integration of exterior lighting systems and night vision imaging systems [AD-A254826] p 63 N93-12732

### ILLUMINATION

- Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses [AD-A254129] p 13 N93-10661

### ILLUSIONS

- Two types of occlusion cues for the perception of 3-D illusory objects in binocular fusion p 222 A93-30239
- Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681

### IMAGE ANALYSIS

- Model for the computation of self-motion in biological systems p 97 A93-17673
- Exocentric judgements in real environments and stereoscopic displays p 189 A93-27190
- Helmet mounted display with multiple image sources p 227 A93-30057
- Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177
- Visual perception of structure from motion [AD-A253235] p 26 N93-11503
- Recognition of partially occluded threat objects using the annealed Hopfield network p 142 N93-19466
- Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 N93-25736

### IMAGE CONTRAST

- Human speed perception is contrast dependent p 55 A93-14119

### IMAGE ENHANCEMENT

- Image enhancement filters significantly improve reading performance for low vision observers p 167 A93-28723

### IMAGE FILTERS

- Image enhancement filters significantly improve reading performance for low vision observers p 167 A93-28723

### IMAGE INTENSIFIERS

- Helicopter night vision goggle testing in the United Kingdom p 148 N93-19917
- Human visual limitations on suprathreshold contrast perception through ANVIS [AC-A259970] p 226 N93-24431

### IMAGE PROCESSING

- Human vision, visual processing, and digital display II; Proceedings of the Meeting, San Jose, CA, Feb. 27-Mar. 1, 1991 [SPIE-1453] p 137 A93-25363
- A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267
- Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782

- Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072

- A computational model for the stereoscopic optics of a head-mounted display p 390 A93-49393

- Visual data interpretation; Proceedings of the Meeting, San Jose, CA, Feb. 10-11, 1992 [SPIE-1668] p 391 A93-49451

- Multistage integration model for human egomotion perception [AIAA PAPER 93-3564] p 406 A93-52664

- Design of a reading test for low vision image warping p 400 A93-53025

- System for generating dynamic video imagery for human factors research [AD-A248675] p 31 N93-11743

- Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981

- A weighted iterative algorithm for neuromagnetic imaging [DE92-040244] p 51 N93-13522

- Neural network retinal model real time implementation [AD-A255652] p 52 N93-14210

- Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104

- Retinal modeling: Segmenting motion from spatio-temporal inputs using neural networks [AD-A258854] p 125 N93-19369

- Advanced cockpit-mission and image management p 144 N93-19760

- Adaptive autonomous target cue p 148 N93-19784
- Why do we see three-dimensional objects? [AD-A259892] p 224 N93-23986
- Computer based analysis and synthesis of retinal function [AD-A260514] p 221 N93-24420

- Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551

- Automated system for early breast cancer detection in mammograms p 253 N93-25568
- A modular head/eye platform for real-time reactive vision [OUEL-1941/92] p 320 N93-28897
- Computing with neural maps: Application to perceptual and cognitive function [AD-A264056] p 341 N93-30033
- Modelling and simulation of human retinal vision processing p 335 N93-30269
- An algorithm for simple and complex feature detection: From retina to primary visual cortex [AD-A264306] p 337 N93-30897
- IMAGE RESOLUTION**
- Human low vision image warping - Channel matching considerations p 231 A93-32444
- Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443
- High-resolution inserts in wide-angle head-mounted stereoscopic displays p 408 A93-53121
- High-resolution contrast control on a video display: Method and calibration [AD-A256552] p 60 N93-15400
- X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 N93-18295
- Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight [AD-A264661] p 341 N93-30542
- IMAGERY**
- Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision [AD-A256059] p 58 N93-14580
- Night vision goggle training: Development and production of six video programs [AD-A258529] p 148 N93-20050
- IMAGES**
- Facilitation and interference in identification of pictures and words [AD-A261484] p 260 N93-26356
- A tutorial on exit pupils and eye rotation with virtual image optical displays [AD-A262399] p 333 N93-29400
- IMAGING TECHNIQUES**
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- Quantitative Helmet Mounted Display system image quality model p 229 A93-30068
- Mapping of electrical muscle stimulation using MRI p 279 A93-40549
- A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging [SAE PAPER 921253] p 298 A93-41423
- Dark cycle monitoring of biological specimens on Space Station Freedom [SAE PAPER 921393] p 274 A93-41551
- System for generating dynamic video imagery for human factors research [AD-A248675] p 31 N93-11743
- Advanced technology for portable personal visualization [AD-A253808] p 32 N93-11783
- Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566
- Integration of exterior lighting systems and night vision imaging systems [AD-A254826] p 63 N93-12732
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment) [AD-A255525] p 70 N93-14554
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 N93-17697
- Helmet-mounted area-of-interest display [AD-A258275] p 139 N93-18029
- A new concept for helmet mounted vision p 145 N93-19767
- Human visual limitations on suprathreshold contrast perception through ANVIS [AD-A259970] p 226 N93-24431
- Proceedings of Workshop 1: The Human Brainmap Database [AD-A260720] p 258 N93-25654
- Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate [AD-A261593] p 260 N93-26436
- Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 N93-26521
- EVA Glove Research Team [NASA-CR-193014] p 313 N93-27847
- A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848
- Low-cost helmet-mounted displays [AD-A262616] p 317 N93-28479
- The AFOSR Workshop on the Future of EEG and MEG [AD-A264338] p 335 N93-30160
- IMMOBILIZATION**
- The effect of the activation of the sympatho-adrenal system on catecholamine inactivation in rat lungs p 2 A93-12864
- Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720
- The state of the endocrine system of rats of different age under conditions of immobilization stress and biomas administration p 242 A93-35671
- IMMUNE SYSTEMS**
- Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662
- Cellular immunosenescence - An overview p 80 A93-20663
- Immune response during space flight p 94 A93-20664
- Influence of microgravity on immune system and genetic information p 160 A93-26572
- In vivo testing confirms a blunting of the human cell-mediated immune mechanism during space flight p 167 A93-28732
- Some indices of humoral immunity in Rhesus monkeys under the effect of extreme space flight factors p 241 A93-35258
- Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines p 280 A93-41123
- Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391
- Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190
- Effect of hypoxic hypoxia on the immune response and some factors of nonspecific resistance of human and animal organisms p 325 A93-43074
- Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934
- Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116
- Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308
- Influence of microgravity on immune system and genetic information p 220 N93-24370
- Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259
- IMMUNITY**
- Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662
- Cellular immunosenescence - An overview p 80 A93-20663
- Immune response during space flight p 94 A93-20664
- Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203
- Some indices of humoral immunity in Rhesus monkeys under the effect of extreme space flight factors p 241 A93-35258
- Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388
- Mechanisms of immune failure in burn injury p 15 N93-11285
- Silent HIV infection p 16 N93-11293
- Immunological parameters in current and former US Air Force personnel p 16 N93-11295
- Susceptibility in USAF recruits to vaccine preventable diseases p 18 N93-11301
- Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 N93-11306
- Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 N93-11307
- Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308
- Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171 p 20 N93-11309
- IMMUNOASSAY**
- Early markers of HIV infection and subclinical disease progression p 17 N93-11296
- Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312
- Phadiatop: A screening test for inhalant allergy p 21 N93-11313
- In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automatized enzyme immunoassay method to dose specific IgE p 21 N93-11314
- Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF) p 21 N93-11316
- IMMUNOLOGY**
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type p 153 A93-28698
- Variable lymphocyte responses in rats after space flight p 154 A93-28704
- In vivo testing confirms a blunting of the human cell-mediated immune mechanism during space flight p 167 A93-28732
- The clinical chemistry and immunology of long-duration space missions p 169 A93-28754
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 A93-32850
- Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391
- Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 N93-11283
- Space flight and immune system p 14 N93-11284
- Mechanisms of immune failure in burn injury p 15 N93-11285
- Clinical types of Hepatitis B p 15 N93-11286
- Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations p 15 N93-11288
- Vaccination against Hepatitis B: The Italian strategy p 15 N93-11289
- Silent HIV infection p 16 N93-11293
- Immunological parameters in current and former US Air Force personnel p 16 N93-11295
- Early markers of HIV infection and subclinical disease progression p 17 N93-11296
- Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297
- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303
- Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304
- Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305
- Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 N93-11306
- Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 N93-11307
- Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308
- Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems p 20 N93-11310
- Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 N93-13327
- Immunology presentation at the 1990 NASA/NSF Antarctica Biomedical Science Working Group p 81 N93-16806
- Immunoconjugates: Magic bullets for cancer therapy? p 253 N93-25567
- Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259
- IMPACT ACCELERATION**
- The effect of variable seat back angles on human response to +Gz impact accelerations [AD-A250673] p 31 N93-11559
- A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672
- IMPACT LOADS**
- Study on mechanical characteristics of viscera in dogs p 3 A93-13540



## IMPACT RESISTANCE

- Identification of degree of head injury caused by impact loads in dog and rabbit p 4 A93-13720  
 Things that go bump in the light - On the optical specification of contact severity p 256 A93-35099  
 The limits of human impact acceleration tolerance [AIAA PAPER 93-3572] p 400 A93-52692  
 Two techniques for measuring locomotion impact forces during zero G [NASA-TP-3305] p 217 N93-23410

### IMPACT RESISTANCE

- Space based robot manipulators - Dynamics of contact and trajectory planning for impact minimization p 135 A93-22827  
 The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202  
 Protective helmet assembly [NASA-CASE-MSC-21842-1] p 106 N93-17088

### IMPACT TESTS

- The effect of variable seat back angles on human response to +Gz impact accelerations [AD-A250673] p 31 N93-11559  
 Design/development of an enhanced biodynamic manikin p 142 N93-19667  
 Improving manikin biofidelity p 142 N93-19668  
 The design and use of automotive crash test dummies p 142 N93-19669  
 The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671  
 A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672

### IMPAIRMENT

- The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299  
 The effects of Benadryl and Hismanal on psychomotor performance and perceived performance p 385 A93-52303

### IMPLANTATION

- Optimal design of composite hip implants using NASA technology p 174 N93-22188  
 The prevalence of artificial lens implants in the civil airman population [DOT/FAA/AM-92/14] p 253 N93-25214  
 Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085

### IMPLANTED ELECTRODES (BIOLOGY)

- Programmable interactive system for cochlear implant electrode stimulation [AD-A262558] p 333 N93-29421

### IN-FLIGHT MONITORING

- Monitoring of pilot actions as part of a knowledge-based system for pilot assistance p 59 N93-15184  
 Model-based reasoning applied to cockpit warning systems p 147 N93-19778

### INCANDESCENCE

- Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce p 357 A93-46468  
 Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation p 357 A93-46469

### INCINERATORS

- Incineration for resource recovery in a closed ecological life support system p 409 A93-54826

### INDEPENDENT VARIABLES

- Spontaneous discovery and use of categorical structure [AD-A261658] p 260 N93-26364

### INDEXES (DOCUMENTATION)

- Aerospace medicine and biology: A cumulative index to a continuing bibliography (supplement 371) [NASA-SP-7011(371)] p 172 N93-20889  
 Toxic substances registry system: Index of material safety data sheets [NASA-TM-108582] p 172 N93-20998  
 Bibliography of the Biosciences Division: 1986 to present [DCIEM-92-20] p 209 N93-23343  
 Index of international publications in aerospace medicine [AD-A262908] p 284 N93-28306

### INDOLES

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 N93-16166

### INDOOR AIR POLLUTION

- Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals [SAE PAPER 921410] p 310 A93-41564

- The role of Environmental Health System air quality monitors in Space Station Contingency Operations [SAE PAPER 921414] p 310 A93-41565

- Application of RADTRAN to estimation of doses to persons in enclosed spaces [DE93-000758] p 97 N93-17230

- Survey of protocols for conducting indoor air quality investigations in large buildings [PB93-119865] p 194 N93-21215

### INDUSTRIAL SAFETY

- Kennedy Space Center environmental health program p 166 A93-28713

### INFECTIOUS DISEASES

- Control of infection in an international airline p 407 A93-52867  
 Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 N93-11283  
 Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300  
 Susceptibility in USAF recruits to vaccine preventable diseases p 18 N93-11301  
 Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302  
 Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171 p 20 N93-11309  
 Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317  
 Infectious disease p 81 N93-16804

### INFERENCE

- Interpretation as abduction [AD-A259608] p 225 N93-24227

### INFLATABLE STRUCTURES

- Inflatable habitation for the lunar base p 106 N93-17442  
 Conceptual design of a thermal control system for an inflatable lunar habitat module [NASA-CR-192014] p 140 N93-18113  
 A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849

### INFORMATION

- Eye movements and visual information processing [AD-A259955] p 225 N93-24297

### INFORMATION FLOW

- Applications of living systems theory to life in space p 105 N93-16865  
 Management of avionics data in the cockpit p 147 N93-19777

### INFORMATION MANAGEMENT

- Information management problems and their influence on cockpit equipment architecture of transport aircraft p 223 A93-31491  
 Man-systems integration and the man-machine interface p 313 N93-27795

### INFORMATION PROCESSING (BIOLOGY)

- Consequences of a basic model of external-information perception p 98 A93-18414  
 Electronic map interpretation in a dual-task context p 176 A93-27144  
 Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice p 186 A93-27145  
 A computer simulation model for attention distribution and event generation p 340 A93-45323  
 Disruption and maintenance of skilled visual search as a function of degree of consistency p 389 A93-52501  
 Headphone localization of speech p 394 A93-52507

- Multistage integration model for human egomotion perception [AIAA PAPER 93-3564] p 406 A93-52664  
 Neurophysiology of motion sickness p 399 A93-55932

- Auditory processing of complex sounds across frequency channels [AD-A253612] p 13 N93-10650

- Cognition in the brain: Investigations using positron emission tomography [AD-A254280] p 14 N93-10765

- An introduction to the information processing components of the brain [RSRE-MEMO-4350] p 25 N93-10979

- Simulation of excitatory/inhibitory interactions in single auditory neurons [AD-A253614] p 50 N93-13252

- Psychophysical analyses of perceptual representations [AD-A255432] p 58 N93-14510

- Decision making in a dynamic task environment: The effect of time pressure [AD-A256557] p 58 N93-14602

- Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962

- Effective neurons and attractor neural networks in cortical environment [PREPRINT-829] p 82 N93-17214

- The effects of display and response codes on information processing in an identification task

- [AD-A259531] p 234 N93-23451  
 Visual processing of object velocity and acceleration [AD-A261048] p 265 N93-25778

- A cognitive architecture for human performance process model research [AD-A261040] p 258 N93-25815

- Duration of alpha suppression increases with angle in a mental rotation task [AD-A261592] p 260 N93-26435

- How expert pilots think: Cognitive processes in expert decision making [DOT/FAA/RD-93/9] p 288 N93-27103

- Quantification of human responses p 340 N93-29564  
 The dynamics of visual representation, attention, encoding, and retrieval processes [AD-A264674] p 342 N93-30543

- Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 N93-30594

- The concentration loading test system: A computer generated process for acquisition of attentiveness control p 344 N93-31235

### INFORMATION SYSTEMS

- The effect of roll-stabilized sensor information on pilot performance p 175 A93-27130  
 Format and structure of a database on health and environmental impacts of different energy systems for electricity generation [DE92-634160] p 12 N93-10222

- Man-machine interface with simulated automatic target recognition systems p 147 N93-19781  
 Operator Performance Support System (OPSS) p 196 N93-22195

- Treatment of human-computer interface in a decision support system [DE93-002281] p 237 N93-24502

- Head mounted displays for virtual reality [AD-A263498] p 322 N93-29340

### INFORMATION THEORY

- Modeling the performance of the human (pilot) interaction in a synthetic flight domain: Information theoretic approach p 141 N93-19465

### INFORMATION TRANSFER

- Methodology for ergonomic tests of the information display on monitor indicators p 101 A93-18530  
 Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896  
 Headphone localization of speech stimuli p 176 A93-27143

### INFRARED DETECTORS

- Dark cycle monitoring of biological specimens on Space Station Freedom [SAE PAPER 921393] p 274 A93-41551

### INFRARED IMAGERY

- Retinal modeling: Segmenting motion from spatio-temporal inputs using neural networks [AD-A258854] p 125 N93-19369

### INFRARED SPECTRA

- Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis [AD-A255582] p 95 N93-16041

### INFRARED SPECTROMETERS

- Transcutaneous analyte measuring methods [AD-A262861] p 333 N93-29509

### INFRARED SPECTROPHOTOMETERS

- Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis [AD-A255582] p 95 N93-16041

### INFRASONIC FREQUENCIES

- Morphological analysis of the hepatic structures in experimental animals after infrasonic exposure p 240 A93-35240

### INGESTION (BIOLOGY)

- Smoking status and body composition, exercise, dietary intake, and alcohol/coffee consumption [AD-A250648] p 23 N93-11893

### INJECTION

- Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A256340] p 55 N93-15198

### INJURIES

- Study on mechanical characteristics of viscera in dogs p 3 A93-13540  
 Identification of degree of head injury caused by impact loads in dog and rabbit p 4 A93-13720  
 Management of trauma and emergency surgery in space p 167 A93-28734  
 Potential health hazards from thermal degradation events - Particulate vs. gas phase effects [SAE PAPER 921388] p 282 A93-41546  
 Determinants of +Gz-related neck pain - A preliminary survey p 380 A93-49227

## SUBJECT INDEX

- Fatal mishap report - First SPH-48 flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308
- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets [AD-A252427] p 13 N93-10709
- Development and enhancement of a model of performance and decision making under stress in a real life setting [AD-A255699] p 99 N93-16111
- Occupant kinematics simulation of the Kegworth air accident p 142 N93-19662
- Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663
- Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664
- The design and use of automotive crash test dummies p 142 N93-19669
- An improved anthropometric test device p 143 N93-19670
- The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671
- An epidemiological study in SAF's pilots ejections p 143 N93-19699
- Upper interior head protection. Volume 1. The development of a research test procedure [PB93-113769] p 194 N93-21537
- Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 N93-21795
- Cellular and tissue injury during nonfreezing cold injury and frostbite [AD-A260574] p 254 N93-25900
- Secondary injury factors and preventative treatment [PB93-176014] p 283 N93-27409
- Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 N93-28759
- Sudden loading and fatigue effects on the human spine [PB93-167526] p 286 N93-29199
- INSECTICIDES**
- Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products [AD-A255224] p 51 N93-13941
- INSECTS**
- Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products [AD-A255224] p 51 N93-13941
- INSPECTION**
- Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures p 405 A93-55348
- Remote surface inspection system --- of large space platforms p 410 A93-55469
- Recognition of partially occluded threat objects using the annealed Hopfield network p 142 N93-19466
- INSPIRATION**
- Respiration curves as an index of pilot workload p 332 A93-45320
- INSTALLING**
- Fires on board aircraft: Toxicological risk in flight p 126 N93-19694
- INSTRUCTORS**
- Success rate analysis of Navy SERGRAD Flight Training p 56 A93-16152
- Advances in training technology and the role of the instructor p 98 A93-18775
- Suited for spacewalking: A teacher's guide with activities [NASA-EP-279] p 65 N93-13692
- Prologue to Action. Life Sciences Education and Science Literacy [PB93-107514] p 159 N93-21230
- INSTRUMENT APPROACH**
- Visual augmentation and scene detail effects in flight training p 180 A93-27454
- Instrument-approach-plate design considerations for displaying radio frequencies p 289 A93-39574
- Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 N93-15968
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857
- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 N93-29888
- INSTRUMENT FLIGHT RULES**
- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 N93-28855
- INSTRUMENT LANDING SYSTEMS**
- Virtual landings --- developing Enhanced Vision Systems for VFR p 410 A93-54868
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857
- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 N93-29888
- INSULIN**
- Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity p 78 A93-20036
- Differential effects of insulin resistance on leucine and glucose kinetics in obesity p 152 A93-27224
- Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity p 168 A93-28736
- Regulation of the carbohydrate metabolism in humans residing in the North p 384 A93-51117
- Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle p 399 A93-55458
- INTEGRATED CIRCUITS**
- Neural network retinal model real time implementation [AD-A255652] p 52 N93-14210
- INTELLIGENCE**
- The AFOSR Workshop on the Future of EEG and MEG [AD-A264338] p 335 N93-30160
- INTERACTIVE CONTROL**
- Dimensions of complexity in learning from interactive instruction --- for robotic systems deployed in space p 191 A93-29111
- Architecture of autonomous systems [NASA-CR-192974] p 266 N93-26047
- Interactive and cooperative sensing and control for advanced teleoperation p 366 N93-32108
- INTERCRANIAL CIRCULATION**
- Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177
- INTERFACES**
- DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field [ETN-93-93799] p 284 N93-28469
- INTERFACIAL TENSION**
- Development of physical and mathematical models for the Porous Ceramic Tube Plant Nitrification System (PCTPNS) [NASA-TM-107551] p 4 N93-10085
- Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764
- INTERNATIONAL COOPERATION**
- Health in space - And on Earth p 156 A93-28738
- INTERPLANETARY FLIGHT**
- Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975
- INTERPLANETARY SPACE**
- Responses of *Bacillus subtilis* spores to space environment - Results from experiments in space p 268 A93-36556
- INTERPLANETARY SPACECRAFT**
- Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management [SAE PAPER 921119] p 290 A93-41311
- Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems [SAE PAPER 921120] p 290 A93-41312
- INTERPRETATION**
- Quantification of human responses p 340 N93-29564
- INTERPROCESSOR COMMUNICATION**
- Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis p 33 N93-11941
- INTERSTELLAR CHEMISTRY**
- Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824
- Carbonaceous chondrites and the origin of life p 412 A93-55997
- INTERSTELLAR MATTER**
- Organic models of interstellar grains p 35 A93-11847
- INTERSTELLAR SPACE**
- Laboratory simulation of organic grain mantles p 268 A93-36554
- INTERVERTEBRAL DISKS**
- Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high + Gz forces p 384 A93-52298
- INTESTINES**
- Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765
- INTOXICATION**
- Pilot performance with blood alcohol concentrations below 0.04 percent p 46 A93-16151
- The effect of low blood alcohol levels on pilot performance in a series of simulated approach and landing trials p 179 A93-27453
- Fires on board aircraft: Toxicological risk in flight p 126 N93-19694
- INTRACRANIAL PRESSURE**
- Case report - Chronic sub-dural hematoma following high-speed ejection p 282 A93-41171
- Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177
- INTRAOCULAR PRESSURE**
- Intraocular pressure in microgravity p 85 A93-17539
- The pigmentary dispersion disorder in USAF aviators p 87 A93-18033
- Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710
- INTRAVEHICULAR ACTIVITY**
- Suction-cup shoes for astronauts - A new method of foot restraint p 62 A93-17072
- Physical and digital simulations for IVA robotics p 391 A93-49445
- Automation and robotics human performance [NASA-CR-193049] p 267 N93-26153
- INTRAVENOUS PROCEDURES**
- Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687
- Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688
- INVENTIONS**
- Protective helmet assembly [NASA-CASE-MSC-21842-1] p 106 N93-17088
- INVENTORIES**
- The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training [AD-A258025] p 131 N93-17919
- Toxic substances registry system: Index of material safety data sheets [NASA-TM-108582] p 172 N93-20998
- INVERSE KINEMATICS**
- Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598
- IODINE**
- Regenerable Microbial Check Valve - Life cycle tests results [SAE PAPER 921316] p 303 A93-41478
- Inactivation of a model coliphage virus in water by iodine [SAE PAPER 921361] p 274 A93-41520
- Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521
- Regenerable biocide delivery unit [NASA-CASE-MSC-21763-1-SB] p 112 N93-18351
- Regenerable biocide delivery unit, volume 1 [NASA-CR-185701-VOL-1] p 274 N93-27122
- ION CHARGE**
- Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188
- ION CONCENTRATION**
- Principles of the organization of calcium metabolism p 7 A93-10124
- ION CURRENTS**
- Silicon neuron [AD-A255091] p 50 N93-12756
- ION DENSITY (CONCENTRATION)**
- Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188
- ION EXCHANGE MEMBRANE ELECTROLYTES**
- SPE water electrolyzers in support of the lunar outpost p 315 N93-27977
- ION EXCHANGE RESINS**
- Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472
- Regenerable Microbial Check Valve - Life cycle tests results [SAE PAPER 921316] p 303 A93-41478
- Regenerable biocide delivery unit [NASA-CASE-MSC-21763-1-SB] p 112 N93-18351

## ION SOURCES

- Regenerable biocide delivery unit, volume 1  
[NASA-CR-185701-VOL-1] p 274 N93-27122
- ION SOURCES**  
Design of ion source of respiratory mass spectrometer  
p 11 A93-13713

## IONIC MOBILITY

- Ion transport across membranes under exposure of the organism to ionizing radiation --- Russian book  
[ISBN 5-12-001601-4] p 243 A93-35679

## IONIZATION

- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels  
[DE93-007815] p 246 N93-26587

## IONIZING RADIATION

- Radiation exposure predictions for long-duration-stay Mars missions  
[AIAA PAPER 92-4584] p 28 A93-13288
- On the biological effects of cosmic rays - Epidemiological studies  
p 239 A93-34858
- Ion transport across membranes under exposure of the organism to ionizing radiation --- Russian book  
[ISBN 5-12-001601-4] p 243 A93-35679
- The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions  
p 324 A93-43034

- DoD space radiation concerns  
[AD-A253135] p 13 N93-10613

- Radiation damage to DNA  
[DE92-015760] p 5 N93-10834
- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation  
[DE92-018066] p 5 N93-10974

- Katz model prediction of Caenorhabditis elegans mutagenesis on STS-42  
[NASA-TM-4383] p 50 N93-13023

- AFRRR Reports --- Radiobiology  
[AD-A257231] p 80 N93-15965

- Target fragmentation in radiobiology  
[NASA-TM-4408] p 124 N93-18381

## IRON COMPOUNDS

- Magnetic domain state and coercivity predictions for biogenic greigite (Fe<sub>3</sub>S<sub>4</sub>) - A comparison of theory with magnetosome observations  
p 38 A93-16481
- Mineral theories of the origin of life and an iron sulfide example  
p 74 A93-18009

## IRON OXIDES

- Ferrous iron oxidation by anoxygenic phototrophic bacteria  
p 271 A93-39280
- The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs  
p 325 A93-43795

## IRRADIATION

- Analysis of retinal function following laser irradiation  
[AD-A255649] p 52 N93-14163
- AFRRR Reports --- Radiobiology  
[AD-A257231] p 80 N93-15965
- Utilization of high energy electron beam in the treatment of drinking and waste water  
[DE92-642335] p 372 N93-32406

## ISCHEMIA

- Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness  
[AD-A255485] p 54 N93-14789

## ISOLATION

- The psychological effects of isolation on a space station - A simulation study  
[SAE PAPER 921191] p 287 A93-41369
- A core facility for the study of neurotoxins of biological origin  
[AD-A254359] p 50 N93-12945
- Nutrition  
p 81 N93-16805
- Long-duration isolation and confinement: Human factors issues and research requirements  
p 100 N93-16808
- Applications of living systems theory to life in space  
p 105 N93-16865

## ISOMERS

- Detection of genetic effects of excess near-ultraviolet irradiation under exobiology conditions  
p 39 A93-17446

## ISOTONICITY

- Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion  
p 44 A93-14968
- Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT  
p 163 A93-28688

## ISOTOPE EFFECT

- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin  
[AD-A262979] p 284 N93-28293

## ISOTOPIC LABELING

- Freeze-dried human red blood cells  
[AD-A253295] p 14 N93-11193

- New techniques for positron emission tomography in the study of human neurological disorders  
[DE92-015353] p 23 N93-11873

- New techniques for positron emission tomography in the study of human neurological disorders  
[DE93-002098] p 95 N93-15900

- Non-invasive evaluation of the cardiac autonomic nervous system by PET  
[DE92-041077] p 96 N93-16441

- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels  
[DE93-007815] p 246 N93-26587

## ITALY

- Vaccination against Hepatitis B: The Italian strategy  
p 15 N93-11289

- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination  
p 18 N93-11303

## J

## JAPANESE SPACECRAFT

- Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover  
p 316 N93-28032

## JET LAG

- Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights)  
p 247 A93-35214

- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm  
[AD-A258146] p 122 N93-18292

- The effects of an antijet lag diet  
p 370 N93-32263

## JP-8 JET FUEL

- The chronic effects of JP-8 jet fuel exposure on the lungs  
[AD-A264162] p 334 N93-30153

## JUDGMENTS

- Influence of animation on dynamical judgments  
p 180 A93-28692

- Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interfaces  
[AD-A254493] p 63 N93-12576

- Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary  
[AD-A257016] p 99 N93-16189

- Decision paths in complex tasks  
[NASA-CR-192121] p 132 N93-18359

- Quantification of human responses  
p 340 N93-29564

## K

## K STARS

- Habitable zones around main sequence stars  
p 197 A93-28376

## KALMAN FILTERS

- Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles  
p 135 A93-22916

## KENYA

- Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population  
p 19 N93-11307

## KIDNEYS

- Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats  
p 77 A93-19994

- Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission)  
p 200 A93-32071

- Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans  
p 332 A93-44180

## KINEMATICS

- A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging  
[SAE PAPER 921253] p 298 A93-41423

- A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging  
p 313 N93-27848

## KINETIC ENERGY

- Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station  
[NASA-CR-192015] p 139 N93-17973

## KINETICS

- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] p 82 N93-17049

- Statistically based decompression tables 8: Linear-exponential kinetics  
[AD-A257613] p 120 N93-17926

## SUBJECT INDEX

- Occupant kinematics simulation of the Kegworth air accident  
p 142 N93-19662
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability  
p 344 N93-31236

## KITS

- Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products  
[AD-A255224] p 51 N93-13941

## KLEBSIELLA

- AFRRR reports  
[AD-A254581] p 49 N93-12649

## KNEE (ANATOMY)

- Shape optimization of tibial prosthesis components  
[NASA-CR-191123] p 246 N93-27085

## KNOWLEDGE BASED SYSTEMS

- Pilot intent and error recognition as part of a knowledge based cockpit assistant  
p 318 N93-28855
- Cognitive interface considerations for intelligent cockpits  
p 319 N93-28865

## KNOWLEDGE BASES (ARTIFICIAL INTELLIGENCE)

- Knowledge-based task planning for the Special Purpose Dexterous Manipulator  
p 191 A93-29110
- Dimensions of complexity in learning from interactive instruction --- for robotic systems deployed in space  
p 191 A93-29111
- Intelligent fault management for the Space Station active thermal control system  
p 32 N93-11930

## L

## LABORATORIES

- Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource  
p 83 N93-17458

## LABORATORY EQUIPMENT

- Gravitational Biology Facility on Space Station: Meeting the needs of space biology  
p 206 N93-22625

## LABYRINTH

- Turning-over reaction during free fall in labyrinthectomized rats after a flight on the Cosmos 936 biosatellite  
p 241 A93-35246
- Neurophysiology of motion sickness  
p 399 A93-55932

## LACTATES

- Beta-adrenergic blockade and lactate metabolism during exercise at high altitude  
[AD-A263544] p 334 N93-29820

## LACTIC ACID

- Autoradiographic distribution and applied pharmacological characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs  
[AD-A255607] p 54 N93-15009

## LAKES

- Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake  
p 38 A93-16544

## LAMINATES

- Optimal design of composite hip implants using NASA technology  
p 174 N93-22188

## LANDING

- The effect of geometric field of view and tunnel design for perspective flight-path displays  
[SAE PAPER 921131] p 291 A93-41319

- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information  
[AD-A263874] p 353 N93-29888

## LANDING LOADS

- A study of biological effects and characteristics of dynamic responses of organism on landing impact  
p 10 A93-13533

## LANGUAGES

- Cognitive competencies - Products of genes, experience, and technology --- for training of primates  
p 201 A93-32113
- Learning about primates' learning, language, and cognition  
p 201 A93-32124

## LARGE SPACE STRUCTURES

- Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms  
p 101 A93-18710

- Development of a large space robot - A multi-segment approach. I  
[AIAA PAPER 93-1463] p 261 A93-34012

- Development of a large space robot - A multi-segment approach. II  
[AIAA PAPER 93-1464] p 262 A93-34013

## LASER APPLICATIONS

- The pigmentary dispersion disorder in USAF aviators  
p 87 A93-18033
- Center of Excellence in laser medicine  
[DE92-018760] p 22 N93-11445

## SUBJECT INDEX

### LASER BEAMS

- Effects of laser glare on visual search performance  
p 180 A93-28158

### LASER DAMAGE

- Effects of laser glare on visual search performance  
p 180 A93-28158  
Analysis of retinal function following laser irradiation  
[AD-A255649] p 52 N93-14163  
Investigation of laser-induced retinal damage  
[AD-A264096] p 338 N93-31094

### LASER MATERIALS

- Studies of a laser/nuclear thermal hardened body armor  
[AD-A255128] p 34 N93-12423

### LASER WEAPONS

- Studies of a laser/nuclear thermal hardened body armor  
[AD-A255128] p 34 N93-12423

### LATENT HEAT

- Conceptual design of a lunar base thermal control system  
p 68 N93-14003

### LATERAL CONTROL

- The effect of roll-stabilized sensor information on pilot performance  
p 175 A93-27130  
The effects of field of view size on the control of roll motion  
p 349 A93-43722

### LATERAL STABILITY

- The effect of roll-stabilized sensor information on pilot performance  
p 175 A93-27130

### LAUNCH ESCAPE SYSTEMS

- A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests  
[SAE PAPER 921154] p 293 A93-41337

### LAUNCH VEHICLES

- Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780  
Candidate technologies for the Integrated Health Management Program  
[NASA-CR-192520] p 217 N93-22655

### LAUNCHING

- The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat  
p 143 N93-19671  
Investigation of the effects of Extra Vehicular Activity (EVA) and Launch and Entry (LES) gloves on performance  
p 266 N93-26061

### LAVA

- Evolving concepts of lunar architecture: The potential of subsebene development  
p 107 N93-17447

### LAYERS

- Evaluation of multilayer mask concept for RESPO 21  
[AD-A253392] p 33 N93-12079

### LEACHING

- Characterization of the water soluble component of inedible residue from candidate CELSS crops  
[NASA-TM-107557] p 139 N93-18111  
Chemical characterization of some aqueous leachates from crop residues in 'CELSS'  
p 115 N93-19399

### LEAF AREA INDEX

- Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce  
p 357 A93-46468  
Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation  
p 357 A93-46469

### LEARNING

- Comparative assessment of psychomotor performance - Target prediction by humans and macaques (Macaca mulatta)  
p 204 A93-33035  
Questioning mechanisms during complex learning  
[AD-A247382] p 26 N93-11415  
A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity  
[AD-A255926] p 52 N93-14109  
Dual-task training strategies and aging  
[AD-A258261] p 131 N93-18027

### LEARNING THEORY

- Cognitive competencies - Products of genes, experience, and technology --- for training of primates  
p 201 A93-32113  
Learning about primates' learning, language, and cognition  
p 201 A93-32124

### LEAVES

- Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (Avena sativa)  
p 329 A93-44941  
Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (Avena sativa)  
p 358 A93-46472  
Resource capture by single leaves  
[DE92-015847] p 5 N93-10461

### LECTURES

- Aviation medicine research: A historical review  
[AD-A258198] p 121 N93-18217

### LEG (ANATOMY)

- Effects of head-down tilt for 10 days on the compliance of the leg  
p 162 A93-28680  
Anthropometry of the foot and lower leg of U.S. Army soldiers: Fort Jackson, SC  
[AD-A261405] p 268 N93-26404

### LENSES

- The prevalence of artificial lens implants in the civil airman population  
[DOT/FAA/AM-92/14] p 253 N93-25214  
A fiber optic probe for the detection of cataracts  
p 254 N93-25593  
A study of the effects of lens focal length on remote driver performance  
[AD-A263191] p 321 N93-28941

### LESIONS

- Neuropsychological components of object identification  
[AD-A261449] p 259 N93-26347  
Analysis of visual loss from retinal lesions  
[AD-A264692] p 336 N93-30494

### LEUKOCYTES

- Alteration in human mononuclear leucocytes following space flight  
p 165 A93-28705  
Features of an ethanol effect in operators with different states of skin tissue basophils  
p 250 A93-35252  
Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines  
p 280 A93-41123

### LEVERS

- Portable seat lift  
[NASA-CASE-MFS-28610-1] p 106 N93-17045

### LIFE (DURABILITY)

- The life span of the biosphere revisited  
p 149 A93-21847  
Regenerable Microbial Check Valve - Life cycle tests results  
[SAE PAPER 921316] p 303 A93-41478

### LIFE RAFTS

- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue  
[AD-A257704] p 107 N93-17697

### LIFE SCIENCES

- The space life sciences strategy for the 21st century  
p 1 A93-10636  
A lunar-based chemical analysis laboratory  
[ISBN 0-937194-25-5] p 39 A93-17426  
Comets and the origins and evolution of life: Proceedings of the Conference, Univ. of Wisconsin, Eau Claire, Sept. 30-Oct. 2, 1991  
p 109 A93-17976  
Dark matter in the solar system - Hydrogen cyanide polymers  
p 110 A93-17987  
Challenges of space medical operations and life sciences management  
p 155 A93-28716  
The Biological Flight Research Facility  
p 239 A93-34581  
Microfossils of the Early Archean Apex chert - New evidence of the antiquity of life  
p 272 A93-40308  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 365)  
[NASA-SP-7011(365)] p 12 N93-10075  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 360)  
[NASA-SP-7011(360)] p 12 N93-10076  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 364)  
[NASA-SP-7011(364)] p 12 N93-10077  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366)  
[NASA-SP-7011(366)] p 12 N93-10079  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 367)  
[NASA-SP-7011(367)] p 12 N93-10080  
JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-024] p 40 N93-13033  
Assessment of programs in space biology and medicine  
[NASA-CR-190930] p 41 N93-13327  
A health care system for the Space Station  
[NASA-TM-108093] p 65 N93-13571  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 368)  
[NASA-SP-7011(368)] p 53 N93-14603  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 369)  
[NASA-SP-7011(369)] p 53 N93-14731  
Publications of the Space Physiology and Countermeasures Program, Neuroscience Discipline: 1980-1990  
[NASA-CR-4476] p 55 N93-15583  
STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission  
[NASA-TM-108034] p 80 N93-15823  
NASA/NSF Antarctic Science Working Group  
p 81 N93-16802

## LIFE SUPPORT SYSTEMS

- NASA/NSF Workshop on Antarctic Research  
p 81 N93-16803  
Infectious disease  
p 81 N93-16804  
Nutrition  
p 81 N93-16805  
Immunology presentation at the 1990 NASA/NSF Antarctic Biomedical Science Working Group  
p 81 N93-16806  
Exercise during long term exposure to space: Value of exercise during space exploration  
p 82 N93-16807  
Long-duration isolation and confinement: Human factors issues and research requirements  
p 100 N93-16808  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 370)  
[NASA-SP-7011(370)] p 121 N93-18108  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 372)  
[NASA-SP-7011(372)] p 172 N93-21044  
Space life sciences overview  
p 158 N93-21074  
Prologue to Action: Life Sciences Education and Science Literacy  
[PB93-107514] p 159 N93-21230  
Environmental health discipline science plan  
[NASA-TM-108042] p 173 N93-21369  
Space human factors discipline science plan  
[NASA-TM-108023] p 194 N93-21370  
Life sciences utilization of Space Station Freedom  
p 205 N93-22622  
Life sciences recruitment objectives  
p 205 N93-22623  
Biomedical Monitoring and Countermeasures Facility  
p 205 N93-22624  
Gravitational Biology Facility on Space Station: Meeting the needs of space biology  
p 206 N93-22625  
An on-orbit viewpoint of life sciences research  
p 206 N93-22629  
Crew health  
p 217 N93-22630  
Bibliography of the Biosciences Division: 1986 to present  
[DCIEM-92-20] p 209 N93-23343  
JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-025] p 244 N93-25405  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 373)  
[NASA-SP-7011(373)] p 256 N93-26945  
JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-93-005] p 276 N93-28683  
JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-027] p 276 N93-28684  
Spontaneous regulating mechanisms that may have led to the origin of life  
[DE93-603677] p 331 N93-31161  
Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377)  
[NASA-SP-7011(377)] p 361 N93-31924
- LIFE SPAN**  
The life span of the biosphere revisited  
p 149 A93-21847
- LIFE SUPPORT SYSTEMS**  
Experimental research of the temperature and humidity control system for manned spacecraft cabin  
p 10 A93-13529  
Controlled Ecological Life Support System - CELSS  
p 62 A93-17432  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite  
p 77 A93-18419  
Controlled Ecological Life Support System (CELSS) modeling  
p 137 A93-25308  
Life support research and development for the Department of Energy Space Exploration Initiative  
p 137 A93-25309  
Dynamic multiobjective decision and its application in environmental control and life support system  
p 230 A93-30439  
Influence of space-flight factors on growth of spirulina  
p 199 A93-30441  
Bioregenerative life support as self-sustaining ecosystem in space  
p 231 A93-32073  
Space Station Water Processor - Current flight design  
[SAE PAPER 921112] p 289 A93-41306  
Overview of NASA's 1991 Life Support Systems Analysis Workshop  
[SAE PAPER 921118] p 290 A93-41310  
Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management  
[SAE PAPER 921119] p 290 A93-41311  
Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems  
[SAE PAPER 921120] p 290 A93-41312  
Recycling and source reduction for long duration space habitation  
[SAE PAPER 921121] p 290 A93-41313

- TRIALSS - Tool for Rapid and Intelligent Advanced Life Support System Selection and Sizing  
[SAE PAPER 921123] p 291 A93-41315
- A low pressure electrolyzer for the next generation submarine  
[SAE PAPER 921125] p 291 A93-41316
- The development of an atmosphere composition monitor for the Environmental Control and Life Support System  
[SAE PAPER 921149] p 292 A93-41333
- Oxygen generation by static feedwater electrolysis for Space Station Freedom  
[SAE PAPER 921151] p 293 A93-41335
- The Centrifuge Facility Life Sciences Glovebox configuration study  
[SAE PAPER 921158] p 293 A93-41341
- Zero gravity phase separator technologies - Past, present and future  
[SAE PAPER 921160] p 293 A93-41342
- Conceptual design of ECLSS microgravity test beds  
[SAE PAPER 921164] p 294 A93-41346
- Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF)  
[SAE PAPER 921186] p 294 A93-41365
- Development of the carbon dioxide removal system blower used on Space Station Freedom  
[SAE PAPER 921188] p 294 A93-41367
- Crop interactions in polyculture and their implications for CELSS design  
[SAE PAPER 921197] p 295 A93-41373
- A trade study method for determining the design parameter of CELSS subsystems  
[SAE PAPER 921198] p 295 A93-41374
- European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed  
[SAE PAPER 921200] p 295 A93-41376
- Functions simulation model of integrated regenerable life support system  
[SAE PAPER 921201] p 295 A93-41377
- A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization  
[SAE PAPER 921210] p 295 A93-41386
- Dew point analysis for Space Station Freedom  
[SAE PAPER 921227] p 296 A93-41401
- Comparative test data assessment and simplified math modelling for Sabatier CO<sub>2</sub> reduction subsystem  
[SAE PAPER 921228] p 296 A93-41402
- Simplified analysis of water distribution for Space Station Freedom  
[SAE PAPER 921230] p 296 A93-41404
- Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations  
[SAE PAPER 921231] p 297 A93-41405
- Development of the nitrogen fixation system for CELSS  
[SAE PAPER 921238] p 297 A93-41411
- Concept of waste transferring mechanisms  
[SAE PAPER 921239] p 297 A93-41412
- OCAM - A CELSS modeling tool: Description and results  
--- Object-oriented Controlled Ecological Life Support System Analysis and Modeling  
[SAE PAPER 921241] p 298 A93-41413
- System integration and verification approach for the environmental control system of the Columbus Attached Pressurised Module  
[SAE PAPER 921261] p 299 A93-41431
- The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test  
[SAE PAPER 921269] p 300 A93-41439
- An assessment of waste processing/resource recovery technologies for lunar/Mars life applications  
[SAE PAPER 921271] p 300 A93-41441
- Catalytic oxidation for treatment of ECLSS and PMMS waste streams --- Process Material Management Systems  
[SAE PAPER 921274] p 301 A93-41443
- Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process  
[SAE PAPER 921275] p 301 A93-41444
- A hybrid regenerable water recovery system for lunar/Mars life support applications  
[SAE PAPER 921276] p 301 A93-41445
- Environmental control of the Mini Pressurized Logistic Module  
[SAE PAPER 921281] p 302 A93-41449
- Hazard and risk assessment for surface components of a lunar base Controlled Ecological Life Support System  
[SAE PAPER 921285] p 302 A93-41451
- Advanced life support systems in lunar and Martian environments utilizing a higher plant based engineering paradigm  
[SAE PAPER 921286] p 302 A93-41452
- Consumables and wastes estimations for the First Lunar Outpost  
[SAE PAPER 921287] p 302 A93-41453
- Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing  
[SAE PAPER 921299] p 303 A93-41464
- Biodeterioration of materials in water reclamation systems  
[SAE PAPER 921311] p 303 A93-41473
- Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate  
[SAE PAPER 921313] p 303 A93-41475
- Gray water recycling with a unique vapor compression distillation (VCD) design  
[SAE PAPER 921318] p 304 A93-41480
- Membrane technology for zero gravity life support systems  
[SAE PAPER 921320] p 304 A93-41482
- Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air  
[SAE PAPER 921321] p 304 A93-41483
- Recent regenerative ECLSS technology developments in Europe  
[SAE PAPER 921332] p 304 A93-41493
- Life Support and Habitability Manual ESA PSS-03-406  
[SAE PAPER 921338] p 305 A93-41497
- Test of the Shuttle Extended Duration Orbiter (EDO) Waste Collection Subsystem (WCS)  
[SAE PAPER 921346] p 305 A93-41505
- Shuttle Orbiter Environmental Control and Life Support System - Flight experience  
[SAE PAPER 921348] p 305 A93-41507
- Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey  
[SAE PAPER 921350] p 306 A93-41509
- Modeling of membrane processes for air revitalization and water recovery  
[SAE PAPER 921352] p 306 A93-41511
- Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models  
[SAE PAPER 921355] p 306 A93-41514
- Biomass productivity and sustainability of a bioregenerative life-support system  
[SAE PAPER 921359] p 307 A93-41518
- Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization  
[SAE PAPER 921391] p 309 A93-41549
- Experimental and theoretical study on membrane distillation using thermopervaporation  
[SAE PAPER 921397] p 309 A93-41554
- Hermes ECLSS - Main requirements and technical solutions  
[SAE PAPER 921400] p 309 A93-41555
- Space Station and lunar/Mars life support research  
p 346 A93-42122
- Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost  
p 346 A93-42124
- Artificial gravity augmentation on the moon and Mars  
p 346 A93-42127
- Regenerative life support technology challenges for the Space Exploration Initiative  
p 346 A93-42128
- LIAC - A closed ecosystem research facility --- Life In A Can  
p 347 A93-42129
- An integrated human/plant metabolic mass balance model  
p 347 A93-42130
- Space habitat environmental health - A systems issue  
p 347 A93-42151
- Implementation of biological elements in life support systems - Rationale and development milestones  
p 390 A93-49302
- Life support systems  
[AAS PAPER 91-320] p 409 A93-54308
- Remote medical systems for the human exploration of space  
[AAS PAPER 91-321] p 401 A93-54309
- Submarine Advanced Integrated Life Support system (SAILS) program  
[AD-A253564] p 32 N93-11812
- ECLSS evolution: Advanced instrumentation interface requirements. Volume 3: Appendix C  
[NASA-CR-184367] p 64 N93-12990
- The environmental control and life-support system for a lunar base: What drives its design  
p 66 N93-13991
- Life systems for a lunar base  
p 66 N93-13992
- Lunar base CELSS: A bioregenerative approach  
p 67 N93-13993
- Crop growth and associated life support for a lunar farm  
p 67 N93-13994
- Engineering verification of the biomass production chamber  
p 67 N93-13996
- Scenarios for optimizing potato productivity in a lunar CELSS  
p 67 N93-13997
- Potential of derived lunar volatiles for life support  
p 67 N93-13998
- Technology development for lunar base water recycling  
p 67 N93-13999
- Plasma reactor waste management systems  
p 68 N93-14000
- Distribution of human waste samples in relation to sizing waste processing in space  
p 68 N93-14001
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 369)  
[NASA-SP-7011(369)] p 53 N93-14731
- Annual report  
[NASA-CR-191389] p 105 N93-16840
- Chemical characterization of some aqueous leachates from crop residues in 'CELSS'  
p 115 N93-19399
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers  
[NASA-CR-177602] p 149 N93-20065
- Study on environment control and life support technology  
p 149 N93-20413
- Space Station ECLSS integration analysis  
[NASA-CR-192470] p 195 N93-22002
- Integrated oxygen recovery system  
[NASA-CR-192343] p 234 N93-22663
- Space life support technology applications to terrestrial environmental problems  
p 265 N93-25617
- Advanced life support study. Modification 10: ECLSS logistical support analysis for Space Station Freedom  
[NASA-CR-192481] p 266 N93-25888
- Membrane technology: A search for membranes for submarine atmosphere control  
[AD-A260581] p 266 N93-25904
- Integrated oxygen recovery system  
[NASA-CR-192982] p 267 N93-26088
- 1991 NASA Life Support Systems Analysis workshop  
[NASA-CR-4466] p 310 N93-27100
- 1992 NASA Life Support Systems Analysis workshop  
[NASA-CR-4467] p 310 N93-27101
- Environmental control and life support system  
p 311 N93-27718
- Environmental control and life support system evolution  
p 311 N93-27719
- Technologies for ECLSS evolution  
p 311 N93-27720
- The ECLSS advanced automation project evolution and technology assessment  
p 312 N93-27723
- Marshall Space Flight Center ECLSS technology activities  
p 312 N93-27724
- JSC ECLSS R/T program overview  
p 312 N93-27725
- Evolving EVA system capability for the evolving Space Station Freedom requirements  
p 312 N93-27791
- Environmental control and life support systems  
p 314 N93-27858
- Oxygen production on the Lunar materials processing frontier  
p 315 N93-27967
- Assessment of the state of the art in life support environmental control for SEI  
p 315 N93-27978
- Dust protection for environmental control and life support systems in the lunar environment  
p 315 N93-27979
- Manned lunar surface site  
p 316 N93-28033
- Evaluation of test methods and requirements for respiratory protection systems 21  
[AD-A262466] p 317 N93-28757
- Selenia: A habitability study for the development of a third generation lunar base  
p 352 N93-29748
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377)  
[NASA-SP-7011(377)] p 361 N93-31924
- Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols  
[NASA-CR-192570] p 359 N93-32354
- Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems  
[NASA-CR-192571] p 359 N93-32365
- ### LIFEBOATS
- The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat  
p 143 N93-19671
- ### LIGANDS
- In vitro selection of optimal DNA substrates for T4 RNA ligase  
p 329 A93-44939
- ### LIGHT (VISIBLE RADIATION)
- Research on sleep, circadian rhythms and aging - Applications to manned spaceflight  
p 94 A93-20658
- Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights  
[AD-A264626] p 341 N93-30426

## SUBJECT INDEX

### LIGHT BEAMS

- A fiber optic probe for the detection of cataracts p 254 N93-25593

### LIGHT SCATTERING

- Studies of a laser/nuclear thermal hardened body armor [AD-A255128] p 34 N93-12423
- A fiber optic probe for the detection of cataracts p 254 N93-25593

### LIGHT SOURCES

- Modification of yield and chlorophyll content in leaf lettuce by HPS radiation and nitrogen treatments p 328 A93-44880
- Bright light delivery system [NASA-CASE-MFS-28723-1] p 96 N93-17058

### LIGHT VALVES

- The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 N93-19782

### LIGHTING EQUIPMENT

- Integration of exterior lighting systems and night vision imaging systems [AD-A254826] p 63 N93-12732

### LIGHTNING

- An efficient lightning energy source on the early earth p 73 A93-17823

### LIMBS (ANATOMY)

- Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280
- Finite element analysis of a composite artificial ankle p 174 A93-22189

### LINE OF SIGHT

- Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

### LINEAR ENERGY TRANSFER (LET)

- Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784
- Human exposure to galactic cosmic rays in space p 410 A93-54887
- Target fragmentation in radiobiology [NASA-TM-4408] p 124 N93-18381

### LINEAR QUADRATIC REGULATOR

- Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517

- On the control of a class of flexible manipulators using feedback linearization approach p 231 A93-31533

### LINGUISTICS

- Ontology of mind, subjective ontology, and the example of temporal expressions [REPT-92-018] p 26 N93-11212
- Interpretation as abduction [AD-A259608] p 225 N93-24227
- Fuzzy neural network methodology applied to medical diagnosis p 334 N93-29546
- Quantification of human responses p 340 N93-29564
- Connectionist models and linguistic theory: Investigations of stress systems in language [AD-A265450] p 364 N93-32064

### LIPID METABOLISM

- Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751
- Lipid peroxidation and the antioxidant defense system in rats after a 13-day flight on the Cosmos-1887 biosatellite p 239 A93-35210
- Mechanisms of the antihypoxic effect of taurine p 325 A93-43073
- Changes in the phospholipid and cholesterol content of rat tissues during adaptation to high altitude at different environmental temperatures p 358 A93-47100
- Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567
- Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835
- Lipodystrophies in the French military flight crew p 362 N93-32249

### LIPIDS

- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 153 A93-28691
- Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672
- Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764
- Blood lipids in aircrew recruits and in RAF aviators p 362 N93-32251

- Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots p 369 N93-32258

- The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259

### LIPOPROTEINS

- Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces p 363 N93-32254

### LIPS (ANATOMY)

- Direct measurement of capillary blood pressure in the human lip p 279 A93-40550

### LIQUEFACTION

- Hybrid oxygen system [AD-A262417] p 317 N93-28464

### LIQUID CHROMATOGRAPHY

- Methods development for total organic carbon accountability [NASA-CR-184438] p 40 N93-12949

### LIQUID COOLING

- The optimum design of personal liquid cooling system p 60 A93-14314
- Lightweight passive microclimate cooling device [AD-A262262] p 317 N93-28112
- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 N93-29471

### LIQUID CRYSTALS

- Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990
- Low-cost color LCD helmet display p 228 A93-30062
- Quantitative Helmet Mounted Display system image quality model p 229 A93-30068
- Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443
- The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 N93-19782
- Low-cost helmet-mounted displays [AD-A262616] p 317 N93-28479

### LIQUID FLOW

- Development of membrane gas removal technology for microgravity liquid flow systems [SAE PAPER 921162] p 294 A93-41344

### LIQUID OXYGEN

- Hybrid oxygen system [AD-A262417] p 317 N93-28464

### LIQUID-GAS MIXTURES

- Zero gravity phase separator technologies - Past, present and future [SAE PAPER 921160] p 293 A93-41342

### LIVER

- Morphological analysis of the hepatic structures in experimental animals after infrasonic exposure p 240 A93-35240

### LOAD DISTRIBUTION (FORCES)

- Pilot investigation - Nominal crew induced forces in zero-g [SAE PAPER 921155] p 293 A93-41338
- Design requirements for force reflecting master controllers p 139 N93-18035

### LOADS (FORCES)

- A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population [NASA-TP-3286] p 96 N93-16619
- Helmeted head and neck dynamics under whole-body vibration p 264 N93-25531

### LOCKING

- Prosthetic elbow joint [NASA-CASE-MFS-28707-1] p 354 N93-30566

### LOCOMOTION

- Simulating reduced gravity - A review of biomechanical issues pertaining to human locomotion p 289 A93-41175
- Two techniques for measuring locomotion impact forces during zero G [NASA-TP-3305] p 217 N93-23410
- Perception/action: An holistic approach [AD-A259597] p 235 N93-24067
- Melatonin, the pineal gland, and circadian rhythms [AD-A264099] p 337 N93-31061

### LOCOMOTIVES

- Engineman stress and fatigue: Pilot tests [PB93-175003] p 351 N93-29675

### LOGIC DESIGN

- Hyperbaric treatment p 360 N93-31454

### LOGISTICS

- The environmental control and life-support system for a lunar base: What drives its design p 66 N93-13991

### LONG DURATION EXPOSURE FACILITY

- Final results of space exposed experiment developed for students p 329 N93-29702

- Continued results of the seeds in space experiment p 330 N93-29703

## LONG DURATION SPACE FLIGHT

- The space life sciences strategy for the 21st century p 1 A93-10636

- To the stars with the cytoskeleton? p 1 A93-11198

- Adaptation of skeletal muscles and physical work capacity in a weightless environment p 38 A93-15527

- Crew factors --- and their psychological problems in long term space flight p 57 A93-17431

- Metabolic changes observed in astronauts p 84 A93-17535

- Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410

- Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411

- The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652

- The clinical chemistry and immunology of long-duration space missions p 169 A93-28754

- Medical-care systems for long-duration space missions p 169 A93-28755

- An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle p 170 A93-28758

- A review of muscle atrophy in microgravity and during prolonged bed rest p 213 A93-30771

- The effects of prolonged weightlessness and reduced gravity environments on human survival p 214 A93-30773

- The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216

- Some features characterizing the supply of astronauts with vitamins C, B1, B2, and B6 during nourishment from canned-food rations on long-term space flights p 249 A93-35231

- Recycling and source reduction for long duration space habitation p 290 A93-41313

- Development of membrane gas removal technology for microgravity liquid flow systems [SAE PAPER 921162] p 294 A93-41344

- The psychological effects of isolation on a space station - A simulation study [SAE PAPER 921191] p 287 A93-41369

- Crop interactions in polyculture and their implications for CELSS design [SAE PAPER 921197] p 295 A93-41373

- Instrumentation for microbial- monitoring of decontamination or biocide system effectiveness [SAE PAPER 921233] p 297 A93-41407

- Space Station Freedom food management [SAE PAPER 921248] p 298 A93-41419

- An assessment of waste processing/resource recovery technologies for lunar/Mars life applications [SAE PAPER 921271] p 300 A93-41441

- Test of the Shuttle Extended Duration Orbiter (EDO) Waste Collection Subsystem (WCS) [SAE PAPER 921346] p 305 A93-41505

- Water reclamation technology development for future long range missions [SAE PAPER 921351] p 306 A93-41510

- NASA Specialized Center for Research and Training (NSCORT) in space environmental health [SAE PAPER 921358] p 307 A93-41517

- Contaminant distribution and accumulation in water recycle systems [SAE PAPER 921360] p 307 A93-41519

- An operational evaluation process for long-duration mission habitats in space p 345 A93-42114

- Space Station and lunar/Mars life support research p 346 A93-42122

- A systems approach to water recycling research p 347 A93-42149

- Space habitat environmental health - A systems issue p 347 A93-42151

- The psychological challenge of space p 339 A93-42658

- Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302

- Depth-dose equivalent relationship for cosmic rays at various solar minima p 391 A93-49564

- Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401

- Medical concerns for exploration-class missions p 386 A93-52409

- Life support systems [AAS PAPER 91-320] p 409 A93-54308

- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366) [NASA-SP-7011(366)] p 12 N93-10079

- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 367) [NASA-SP-7011(367)] p 12 N93-10080



## LONG TERM EFFECTS

- Crew health p 217 N93-22630  
JPRS report: Science and technology. Central Eurasia: Life sciences p 253 N93-25407  
[JPRS-ULS-92-022]  
The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595  
Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model p 245 N93-26069  
Issues on human acceleration tolerance after long-duration space flights p 334 N93-29651  
[NASA-TM-104753]  
**LONG TERM EFFECTS**  
The Biological Flight Research Facility p 239 A93-34581  
**LOSSES**  
Analysis of visual loss from retinal lesions [AD-A264692] p 336 N93-30494  
**LOUDNESS**  
Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 N93-26521  
**LOW ALTITUDE**  
Multidimensional scaling analysis of terrain features relevant for simulating low-altitude flight p 188 A93-27186  
Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555  
Perceptual dimensions of visual scenes relevant for simulating low-altitude flight [AD-A254645] p 57 N93-12662  
**LOW FREQUENCIES**  
Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970  
Health effects of low-frequency electric and magnetic fields [DE93-005675] p 127 N93-19838  
**LOW PRESSURE**  
Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 N93-29216  
**LOW TEMPERATURE**  
Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia [AD-A255120] p 34 N93-12291  
An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 N93-30818  
**LOW TEMPERATURE ENVIRONMENTS**  
Investigation of the character of changes in the 'central' temperature of the body in cold environment, using a rabbit-body thermoregulation model p 112 A93-25651  
**LOWER BODY NEGATIVE PRESSURE**  
The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690  
Application of system identification to research on cardiovascular regulatory function p 3 A93-13544  
The cardiovascular system p 46 A93-15530  
Development of lower body negative pressure as a countermeasure for orthostatic intolerance p 83 A93-17529  
Posture and the circulation - The age effect p 93 A93-20653  
Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686  
Lower body negative pressure system for simulation of +Gz-induced physiological strain p 119 A93-25210  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681  
Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682  
Carotid-cardiac baroreflex response and LBPN tolerance following resistance training p 164 A93-28696  
Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance p 280 A93-41119  
Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure p 281 A93-41168  
Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096  
Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220  
Transcapillary fluid responses to lower body negative pressure p 380 A93-49292

- Effect of aerobic capacity on Lower Body Negative Pressure (LBPN) tolerance in females [NASA-TP-3298] p 128 N93-20318  
Respiratory response to varying degrees of tilt and lower body negative pressure p 173 N93-21114  
Cardiovascular stress test with non-invasive techniques p 221 N93-24399  
MAC to VAX connectivity: Heart rate spectral analysis system p 254 N93-25594  
**LUMINAIRES**  
Discomfort glare from high-intensity discharge headlamps: Effects of context and experience [PB93-174720] p 336 N93-30659  
**LUMINANCE**  
The effects of pyridostigmine bromide on visual performance p 87 A93-18034  
Chromaticity and luminance as coding dimensions in visual search p 103 A93-19989  
Effects of display luminance on the recognition of color symbols on similar color backgrounds p 189 A93-27191  
The effects of luminance boundaries on color perception [AD-A250705] p 22 N93-11841  
Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity [AD-A255989] p 58 N93-14416  
**LUMINOUS INTENSITY**  
Stimulation of lettuce productivity by manipulation of diurnal temperature and light p 327 A93-44879  
**LUNAR BASED EQUIPMENT**  
Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458  
Conceptual study on manned lunar surface site p 316 N93-28029  
Conceptual study of manned lunar surface site p 316 N93-28031  
**LUNAR BASES**  
A lunar-based chemical analysis laboratory [ISBN 0-937194-25-5] p 39 A93-17426  
Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL) p 39 A93-17429  
Operational medicine on the lunar base p 48 A93-17430  
Controlled Ecological Life Support System - CELSS p 62 A93-17432  
Chemical and toxicological assessment of environmental contaminants in the Lunar-Chemical Analysis Laboratory p 62 A93-17433  
Exobiology science objectives at a lunar base p 71 A93-17435  
Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439  
Detection of genetic effects of excess near-ultraviolet irradiation under exobiology conditions p 39 A93-17446  
Rationale for a hyperbaric treatment capability at a Lunar Station p 213 A93-30286  
Human factor considerations for the First Lunar Outpost [AIAA PAPER 93-1014] p 223 A93-30928  
An assessment of waste processing/resource recovery technologies for lunar/Mars life applications [SAE PAPER 921271] p 300 A93-41441  
A hybrid regenerative water recovery system for lunar/Mars life support applications [SAE PAPER 921276] p 301 A93-41445  
Hazard and risk assessment for surface components of a lunar base Controlled Ecological Life Support System [SAE PAPER 921285] p 302 A93-41451  
Lunar habitats - Places for people p 344 A93-41991  
Lunar base requirements for human habitability p 345 A93-41995  
Space Station and lunar/Mars life support research p 346 A93-42122  
Pressure suit requirements for moon and Mars EVA's p 346 A93-42123  
Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost p 346 A93-42124  
Lunar base pressure, O2 fraction, and ExtraHabitat Activity suit design p 346 A93-42125  
Medical care on the moon p 331 A93-42126  
Artificial gravity augmentation on the moon and Mars p 346 A93-42127  
LIAC - A closed ecosystem research facility --- Life In A Can p 347 A93-42129  
An integrated human/plant metabolic mass balance model p 347 A93-42130  
Habitat automation p 33 N93-11976  
Thermal control systems for low-temperature heat rejection on a lunar base p 65 N93-13717  
[NASA-CR-191286]

- The environmental control and life-support system for a lunar base: What drives its design p 66 N93-13991  
Life systems for a lunar base p 66 N93-13992  
Lunar base CELSS: A bioregenerative approach p 67 N93-13993  
Crop growth and associated life support for a lunar farm p 67 N93-13994  
Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997  
Potential of derived lunar volatiles for life support p 67 N93-13998  
Technology development for lunar base water recycling p 67 N93-13999  
Conceptual design of a lunar base thermal control system p 68 N93-14003  
The real world and lunar base activation scenarios p 68 N93-14014  
The lunar community church: Contributions to lunar living and to evolution of ethical and spiritual thinking p 57 N93-14020  
Life support and self-sufficiency in space communities p 105 N93-16866  
Inflatable habitation for the lunar base p 106 N93-17442  
Preliminary design study of lunar housing configurations p 106 N93-17443  
Prefabricated foldable lunar base modular systems for habitats, offices, and laboratories p 106 N93-17444  
Concrete lunar base investigation p 107 N93-17445  
Vertical regolith shield wall construction for lunar base applications p 107 N93-17446  
Evolving concepts of lunar architecture: The potential of subselen development p 107 N93-17447  
Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 N93-17448  
Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458  
Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018  
Preliminary design of a radiator shading device for a lunar outpost [NASA-CR-192016] p 139 N93-18019  
Conceptual design of a thermal control system for an inflatable lunar habitat module [NASA-CR-192014] p 140 N93-18113  
Oxygen production on the Lunar materials processing frontier p 315 N93-27967  
SPE water electrolyzers in support of the lunar outpost p 315 N93-27977  
Assessment of the state of the art in life support environmental control for SEI p 315 N93-27978  
Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979  
Lunar base thermal management/power system analysis and design p 315 N93-27985  
Conceptual study on manned lunar surface site p 316 N93-28029  
Conceptual study of manned lunar surface site p 316 N93-28031  
Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032  
Lunar surface experiment system p 316 N93-28034  
Earth to lunar CELSS evolution p 351 N93-29727  
Selenia: A habitability study for the development of a third generation lunar base p 352 N93-29748  
GENESIS 2: Advanced lunar outpost p 352 N93-29760  
**LUNAR COMPOSITION**  
The Moon: Biogenic elements p 113 N93-18548  
**LUNAR CONSTRUCTION EQUIPMENT**  
Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018  
**LUNAR DUST**  
Mitigation of dust contamination during EVA operations on the moon and Mars p 345 A93-42107  
Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979  
**LUNAR ENVIRONMENT**  
Chemical and toxicological assessment of environmental contaminants in the Lunar-Chemical Analysis Laboratory p 62 A93-17433  
A study to explore locomotion patterns in partial gravity environments [SAE PAPER 921157] p 293 A93-41340  
Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406  
Human safety in the lunar environment p 105 N93-16867  
Design of a radiator shade for testing in a simulated lunar environment [NASA-CR-192080] p 108 N93-17710

## SUBJECT INDEX

## SUBJECT INDEX

- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806
- Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979
- LUNAR EXCAVATION EQUIPMENT**
- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018
- LUNAR EXPLORATION**
- Exobiology science objectives at a lunar base p 71 A93-17435
- Consumables and wastes estimations for the First Lunar Outpost [SAE PAPER 921287] p 302 A93-41453
- The Moon: Biogenic elements p 113 N93-18548
- LUNAR GRAVITATION**
- Operational medicine on the lunar base p 48 A93-17430
- An analysis of human performance in simulated partial-gravity environments p 347 A93-42173
- Bone loss and human adaptation to lunar gravity p 51 N93-14002
- LUNAR LANDING SITES**
- Lunar surface experiment system p 316 N93-28034
- LUNAR MINING**
- Potential of derived lunar volatiles for life support p 67 N93-13998
- LUNAR MODULE**
- Conceptual design of a thermal control system for an inflatable lunar habitat module [NASA-CR-192014] p 140 N93-18113
- LUNAR RADIATION**
- Design of a radiator shade for testing in a simulated lunar environment [NASA-CR-192080] p 108 N93-17710
- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806
- LUNAR RESOURCES**
- Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- Potential of derived lunar volatiles for life support p 67 N93-13998
- Conceptual design of a lunar base thermal control system p 68 N93-14003
- Oxygen production on the Lunar materials processing frontier p 315 N93-27967
- Assessment of the state of the art in life support environmental control for SEI p 315 N93-27978
- LUNAR ROCKS**
- Vertical regolith shield wall construction for lunar base applications p 107 N93-17446
- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018
- Oxygen production on the Lunar materials processing frontier p 315 N93-27967
- LUNAR ROVING VEHICLES**
- Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032
- LUNAR SHELTERS**
- Inflatable habitation for the lunar base p 106 N93-17442
- Preliminary design study of lunar housing configurations p 106 N93-17443
- Prefabricated foldable lunar base modular systems for habitats, offices, and laboratories p 106 N93-17444
- Concrete lunar base investigation p 107 N93-17445
- Vertical regolith shield wall construction for lunar base applications p 107 N93-17446
- Evolving concepts of lunar architecture: The potential of subelene development p 107 N93-17447
- Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 N93-17448
- Conceptual study on manned lunar surface site p 316 N93-28029
- LUNAR SOIL**
- Mitigation of dust contamination during EVA operations on the moon and Mars p 345 A93-42107
- Potential of derived lunar volatiles for life support p 67 N93-13998
- Oxygen production on the Lunar materials processing frontier p 315 N93-27967
- LUNAR SURFACE**
- Exobiology science objectives at a lunar base p 71 A93-17435
- LIAC - A closed ecosystem research facility --- Life In A Can p 347 A93-42129
- Conceptual design of a lunar base thermal control system p 68 N93-14003
- Human safety in the lunar environment p 105 N93-16867
- Evolving concepts of lunar architecture: The potential of subelene development p 107 N93-17447

- The Moon: Biogenic elements p 113 N93-18548
- Lunar base thermal management/power system analysis and design p 315 N93-27985
- LUNGS**
- The effect of the activation of the sympatho-adrenal system on catecholamine inactivation in rat lungs p 2 A93-12864
- Maximal lung ventilation and forced expiration rate under hyperbaria p 76 A93-18297
- Parameters of external breathing in an excess-pressure atmosphere p 76 A93-18298
- Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation p 77 A93-18301
- Heart and lung alterations in neonatal rats exposed to CO or high altitude p 77 A93-20027
- Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682
- Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683
- Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318
- A linear, time-varying simulation of the respiratory tract system [DE93-004515] p 218 N93-24009
- The acute inhalation toxicity of pyrolysis products of halon 1301 p 254 N93-25629
- Evaluation of NO(x)-induced toxicity [AD-A261034] p 283 N93-28122
- The chronic effects of jP-8 jet fuel exposure on the lungs [AD-A264162] p 334 N93-30153
- LYMPH**
- Correlation between the lymph dynamics and venous pressure during short-term antihypertensive effects p 325 A93-43070
- LYMPHOCYTES**
- Experimental research on the anti-irradiation effects of KW-1 - Protective effect on the 5-HT content of tissues in irradiated mice p 3 A93-13542
- Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442
- Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662
- Cellular immunosenescence - An overview p 80 A93-20663
- Immune response during space flight p 94 A93-20664
- Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203
- Influence of microgravity on immune system and genetic information p 160 A93-26572
- Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684
- Cytokine secretion by immune cells in space p 153 A93-28694
- Variable lymphocyte responses in rats after space flight p 154 A93-28704
- Flow cytometric analysis of lymphocyte surface markers following a 1-Gy dose of gamma radiation p 281 A93-41170
- Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934
- Space flight and immune system p 14 N93-11284
- Mechanisms of immune failure in burn injury p 15 N93-11285
- Immunological parameters in current and former US Air Force personnel p 16 N93-11295
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- Influence of microgravity on immune system and genetic information p 220 N93-24370

## M

- M STARS**
- Habitable zones around main sequence stars p 197 A93-28376
- MACHINE LEARNING**
- Constraints on learning in dynamic synapses [PREPRINT-890] p 100 N93-17026
- The cognitive, perceptual, and neural bases of skilled performance [AD-A258236] p 130 N93-17820
- An accelerated training method for back propagation networks [NASA-CASE-MS-C-21625-1] p 340 N93-29610

## MAGNETIC RESONANCE

- Connectionist models and linguistic theory: Investigations of stress systems in language [AD-A265450] p 364 N93-32064
- MACROMOLECULES**
- Effects of a microgravity environment on the crystallization of biological macromolecules p 357 A93-45995
- MACROPHAGES**
- Effects of antihypertensive suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693
- Cytokine secretion by immune cells in space p 153 A93-28694
- MAGNETIC ANOMALIES**
- Development of K.E. Tsiolkovsky's ideas on the interaction between space, nature, and man p 90 A93-18408
- MAGNETIC DOMAINS**
- Magnetic domain state and coercivity predictions for biogenic greigite (Fe<sub>3</sub>S<sub>4</sub>) - A comparison of theory with magnetosome observations p 38 A93-16481
- MAGNETIC EFFECTS**
- The effects of exposure to 50 mT ELF magnetic fields for 96 h on rabbit EEG p 4 A93-13712
- The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 [DE92-040153] p 41 N93-13503
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 [DE92-040152] p 41 N93-13520
- MAGNETIC FIELDS**
- Multiple evolutionary origins of magnetotaxis in bacteria p 153 A93-27799
- Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenic layer of rat testes p 240 A93-35229
- Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat p 327 A93-44844
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 [DE92-040153] p 41 N93-13503
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 [DE92-040152] p 41 N93-13520
- Neuromagnetic investigations of cortical regions underlying short-term memory [AD-A255788] p 58 N93-14646
- Cognition and the brain [AD-A255483] p 59 N93-14788
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 N93-16166
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- Health effects of low-frequency electric and magnetic fields [DE93-005675] p 127 N93-19838
- Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates [DE93-007677] p 207 N93-22913
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates [DE93-007678] p 211 N93-24455
- Potential human health effects associated with power frequency electric and magnetic fields [PB93-132678] p 221 N93-24590
- Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate [AD-A261593] p 260 N93-26436
- MAGNETIC LEVITATION VEHICLES**
- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- MAGNETIC RESONANCE**
- Magnetic resonance imaging and electromyography as indexes of muscle function p 44 A93-14975
- Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280

## MAGNETIC STORMS

- Mapping of electrical muscle stimulation using MRI  
p 279 A93-40549
- A feasibility study of hand kinematics for EVA analysis  
using magnetic resonance imaging  
[SAE PAPER 921253] p 298 A93-41423
- Functional MRI studies of human vision on a clinical  
imager  
[DE92-017448] p 49 N93-12566
- Neuromagnetic investigation of cortical regions  
underlying short-term memory  
[AD-A261445] p 261 N93-26521
- EVA Glove Research Team  
[NASA-CR-193014] p 313 N93-27847
- A feasibility study of hand kinematics for EVA analysis  
using magnetic resonance imaging p 313 N93-27848

## MAGNETIC STORMS

- Psychosomatic status and flying skill during geomagnetic  
disturbances p 257 A93-35251

## MAIN SEQUENCE STARS

- Habitable zones around main sequence stars  
p 197 A93-28376

## MAINTENANCE

- Candidate technologies for the Integrated Health  
Management Program  
[NASA-CR-192520] p 217 N93-22655

## MAINTENANCE TRAINING

- Human Factors Issues in Aircraft Maintenance and  
Inspection. Science, technology, and management: A  
program review  
[PB93-146975] p 234 N93-23647
- Human Factors in Aviation Maintenance, phase 2  
[DOT/FAA/AM-93/5] p 267 N93-26089

## MALES

- Clinical and immunological response to vaccination with  
parenteral or oral vaccines in two groups of 30 recruits  
p 19 N93-11305
- Vascular uptake of rehydration fluids in hypohydrated  
men at rest and exercise  
[NASA-TM-103942] p 255 N93-26133
- Field trial of caffeine on physical performance at altitude:  
An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894

## MAMMALS

- The role of dermorphin in the regulation of the winter  
hibernation processes in mammals p 38 A93-16748
- The role of central monoaminergic systems in arousal  
and selective attention  
[AD-A258500] p 122 N93-18264
- Neurophysiological analysis of circadian rhythm  
entrainment  
[AD-A264681] p 361 N93-32018

## MAMMARY GLANDS

- Automated system for early breast cancer detection in  
mammograms p 253 N93-25568

## MAN ENVIRONMENT INTERACTIONS

- Scaling issues for biodiversity protection  
[DE92-016689] p 6 N93-12315

## MAN MACHINE SYSTEMS

- Design of a display system for a human pilot's  
supervisory tasks p 27 A93-11201
- Space robotics and its man-machine interface  
p 27 A93-11204
- Controllability of the voice command system - A  
preliminary study p 27 A93-11287
- Keeping the pilot in the loop p 29 A93-13413
- Advanced civil airliner cockpit research at RAE  
Bedford p 29 A93-13416
- Evaluation of finger motor reaction in flyer when handling  
throttle and stick p 29 A93-13539
- Spectral analysis of visual symbols p 30 A93-13718
- A study of human brain somatosensory evoked potential  
and its application to man-machine-environment system  
engineering - Preliminary exploration of SEP in normal  
adult p 12 A93-13719
- Man-machine interface issues for space nuclear power  
systems p 60 A93-13907
- Study of overall analysis method of the  
man-machine-environment systems p 61 A93-14413
- Operator/system communication - An optimizing  
decision tool p 101 A93-19104
- Fusing human and machine skills for remote robotic  
operations p 137 A93-24994
- World model and its uncertainty in supervisory robot  
control p 183 A93-27027
- Emergence of telerobotic control enhancement from  
research in machine autonomy p 183 A93-27028
- Virtual display aids for teleoperation  
p 183 A93-27029
- A telerobotic virtual control system  
p 183 A93-27030
- Interactive Scene Analysis Module - A sensor-database  
fusion system for telerobotic environments  
p 184 A93-27032
- Real time proximity cues for teleoperation using model  
based force reflection p 184 A93-27033

- Intelligent robotics capabilities of the teleautonomy  
testbed p 184 A93-27035
- Technology test results from an intelligent, free-flying  
robot for crew and equipment retrieval in space  
p 184 A93-27037

- Automation, authority and angst - Revisited  
p 185 A93-27127

- Experimental validation of the attention switching  
component of the COGNET framework  
p 186 A93-27141

- Task-analytic evaluations of Space Station Freedom  
workstations p 187 A93-27157

- Pilot interaction with cockpit automation - Operational  
experiences with the Flight Management System  
p 189 A93-27455

- Estimation of the number of operators and their  
efficiency in flight vehicle control p 193 A93-29696

- Flight Telerobotic Servicer legacy  
[AIAA PAPER 93-1157] p 231 A93-31032

- Compensating lags in head-coupled displays using head  
position prediction and image deflection  
p 231 A93-31782

- Studies of the field-of-view resolution tradeoff in  
virtual-reality systems p 232 A93-33443

- Proposed evaluation framework for assessing operator  
performance with multisensor displays  
p 232 A93-33444

- The design of virtual spaces and virtual environments  
p 232 A93-33445

- The role of mental models in team performance in  
complex systems p 262 A93-34985

- Agent-based pilot-vehicle interfaces - Concept and  
prototype p 262 A93-34986

- Operator vision aids for telerobotic assembly and  
servicing in space p 262 A93-35530

- Perceptual effects of synthetic reverberation on  
three-dimensional audio systems p 257 A93-36583

- Human factors problems for aircrew-aircraft interfaces  
- Where should we focus our efforts?  
p 264 A93-37300

- Task allocation and automation in design and operation  
of man-machine systems p 348 A93-42842

- Design of the man-machine interface for an automatic  
target cue system p 348 A93-42843

- An evaluation of miniaturized aircraft keyboards  
p 348 A93-42844

- 'Liveware' survey of human systems integration (HSI)  
tools p 349 A93-42847

- CSERIAC case studies in ergonomics information  
analysis --- for crew systems p 349 A93-42850

- Evaluation of speech technology for enhancing  
performance of man-machine systems  
p 350 A93-44846

- Distribution of functions in a man-machine control  
system of a certain type p 364 A93-45687

- Designs and development of a master-slave  
teleoperated robot p 390 A93-49357

- Synthetic experience - A proposed taxonomy  
p 390 A93-49398

- Mental rotation - A key to mitigation of motion sickness  
in the virtual environments? p 387 A93-49404

- Will simulation sickness slow down the diffusion of virtual  
environment technology? p 391 A93-49405

- Interactive and cooperative sensing and control for  
advanced teleoperation p 391 A93-49443

- Telerobot control mode performance assessment  
[AAS PAPER 92-053] p 392 A93-50593

- Modeling strategic behavior in human-automation  
interaction - Why an 'aid' can (and should) go unused  
p 394 A93-52502

- What optical cues do pilots use to initiate the landing  
flare? Results of a piloted simulator experiment  
[AIAA PAPER 93-3561] p 406 A93-52661

- The limits of human impact acceleration tolerance  
[AIAA PAPER 93-3572] p 400 A93-52692

- Human-centered automation and AI - Ideas, insights,  
and issues from the Intelligent Cockpit Aids research  
effort p 407 A93-52764

- User evaluation of a stereoscopic display for space  
training applications p 408 A93-53123

- Intelligent sensing and control for advanced  
teleoperation p 409 A93-54158

- Human engineering issues for data link systems  
[SAE ARD 50027] p 410 A93-54874

- KC-135 crew reduction feasibility demonstration  
simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713

- Advanced technology for portable personal  
visualization [AD-A253808] p 32 N93-11783

- From pilot's associate to satellite controller's  
associate p 32 N93-11922

- Super auditory localization for improved human-machine  
interfaces [AD-A254699] p 34 N93-12229

- Operator workload predictions for the revised AH-64A  
workload prediction model. Volume 2: Appendixes A  
through H [AD-A254939] p 63 N93-12545

- The human-electronic crew: Is the team maturing? The  
2nd Joint GAF/RAF/USAF Workshop on  
Human-Electronic Crew Teamwork  
[AD-A256192] p 69 N93-14520

- A voyage to Mars: A challenge to collaboration between  
man and machines p 70 N93-14614

- Compliant walker  
[NASA-CASE-GSC-13348-2] p 53 N93-14708

- Aerospace medicine and biology: A continuing  
bibliography with indexes (supplement 369)  
[NASA-SP-7011(369)] p 53 N93-14731

- A monitoring and control system for complex  
man-machine systems: Preliminary design  
p 70 N93-14951

- Using constraint satisfaction networks to study aircrew  
selection for advanced cockpits  
[AD-A258151] p 140 N93-18293

- Cognitive engineering models in space systems  
[NASA-CR-192001] p 141 N93-18517

- Modeling the performance of the human (pilot)  
interaction in a synthetic flight domain: Information  
theoretic approach p 141 N93-19465

- Advanced Aircraft Interfaces: The Machine Side of the  
Man-Machine Interface  
[AGARD-CP-521] p 144 N93-19757

- Engineering the visibility of small features on electronic  
flight displays p 144 N93-19758

- Human factors problems for aircrew-aircraft interfaces:  
Where should we focus our efforts? p 144 N93-19759

- Advanced cockpit-mission and image management  
p 144 N93-19760

- Aircrew acceptance of automation in the cockpit  
p 144 N93-19761

- Time stress measurement devices for enhancement of  
onboard bit performance p 144 N93-19762

- Developing virtual cockpits p 145 N93-19764

- Panoramic cockpit displays p 145 N93-19765

- A new concept for helmet mounted vision  
p 145 N93-19767

- The MOD (UK) integrated helmet technical demonstrator  
programme p 145 N93-19769

- Multi-function visor p 146 N93-19770

- The use of voice processing for some aspects of the  
pilot-vehicle-interface in an aircraft p 146 N93-19772

- Multimodal dialog system for future cockpits  
p 146 N93-19773

- A systems approach to the advanced aircraft  
man-machine interface p 146 N93-19776

- Management of avionics data in the cockpit  
p 147 N93-19777

- Model-based reasoning applied to cockpit warning  
systems p 147 N93-19778

- The integration of advanced cockpit and systems  
design p 147 N93-19779

- CVA, cockpit design and development tool  
p 147 N93-19780

- Man-machine interface with simulated automatic target  
recognition systems p 147 N93-19781

- The active-matrix LC head-down display (AM-LCD):  
Operational experience and growth potential  
p 148 N93-19782

- Equipment, more or less ready to be used in  
helicopters p 148 N93-19785

- Human factors engineering: A key element of  
instrumentation and control system design  
[DE93-006731] p 264 N93-25415

- Automation and robotics human performance  
[NASA-CR-193049] p 267 N93-26153

- Man-systems distributed system for Space Station  
Freedom p 312 N93-27788

- EVA and telerobot interaction p 312 N93-27792

- Man-systems integration and the man-machine  
interface p 313 N93-27795

- Extravehicular activity technology discipline  
p 314 N93-27859

- Manned systems technology discipline  
p 314 N93-27860

- Combat Automation for Airborne Weapon Systems:  
Man/Machine Interface Trends and Technologies  
[AGARD-CP-520] p 317 N93-28850

- Pilot decision aiding for weapon delivery: A novel  
approach to fire control cueing using parallel computing  
p 317 N93-28853

- Pilot intent and error recognition as part of a knowledge  
based cockpit assistant p 318 N93-28855

- The design and development of the new RAF standard  
HUD format p 318 N93-28856

- Virtual interface applications for airborne weapons  
systems p 318 N93-28858

- Operator and automation capability analysis: Picking the  
right team p 319 N93-28864

- System automation and pilot-vehicle-interface for unconstrained low-altitude night attack p 320 N93-28867
- Overview of cockpit technology research and development programs for improvement of the man/machine interface: Review of the AGARD AVP Symposium held in Madrid, May 1992 p 320 N93-28872
- Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system [NASA-TM-104769] p 321 N93-29044
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377) [NASA-SP-7011(377)] p 361 N93-31924
- Man-machine cooperation in advanced teleoperation p 366 N93-32106
- Integration of advanced teleoperation technologies for control of space robots p 366 N93-32107
- Interactive and cooperative sensing and control for advanced teleoperation p 366 N93-32108
- MAN-COMPUTER INTERFACE**
- Design of a display system for a human pilot's supervisory tasks p 27 A93-11201
- Distance and organization in multifunction displays p 102 A93-19986
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- Automation, authority and angst - Revisited p 185 A93-27127
- Experimental validation of the attention switching component of the COGNET framework p 186 A93-27141
- Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation p 186 A93-27148
- A systems analysis to identify human factors issues and requirements for data link p 186 A93-27153
- Display format and highlight validity effects on search performance using complex visual displays p 187 A93-27160
- Human-computer cooperative problem solving in satellite ground control p 188 A93-27163
- Using GOMS models and hypertext to create representations of medical procedures for online display p 188 A93-27170
- A distributed telerobotics system for space operations p 192 A93-29132
- Intelligent virtual interfaces for telerobotics p 193 A93-29136
- An operator interface design for a telerobotic inspection system [AIAA PAPER 93-1160] p 231 A93-31034
- Agent-based pilot-vehicle interfaces - Concept and prototype p 262 A93-34986
- Perceptual effects of synthetic reverberation on three-dimensional audio systems p 257 A93-36583
- An evaluation of miniaturized aircraft keyboards p 348 A93-42844
- Investigation of individual and typological features of an operator's nervous system under different work regimes p 339 A93-43024
- Designs and development of a master-slave teleoperated robot p 390 A93-49357
- Transforming human hand motion for telemanipulation p 390 A93-49394
- Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503
- Human factors with nonhumans - Factors that affect computer-task performance p 404 A93-52721
- Human-centered automation and AI - Ideas, insights, and issues from the Intelligent Cockpit Aids research effort p 407 A93-52764
- 3-D target designation using two control devices and an aiding technique --- in fighter cockpits p 408 A93-53120
- Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 N93-11784
- Super auditory localization for improved human-machine interfaces [AD-A254699] p 34 N93-12229
- Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interfaces [AD-A254493] p 63 N93-12576
- Human perceptual deficits as factors in computer interface test and evaluation [DE92-019124] p 63 N93-12712
- Ocular attention-sensing interface system [NASA-CR-190884] p 65 N93-13450
- Formal aspects of human-computer interaction p 66 N93-13909
- Cognitive engineering models in space systems [NASA-CR-192001] p 141 N93-18517
- The effects of iconic presentation on individuals [AD-A258785] p 133 N93-18949
- Principles for integrating voice I/O in a complex interface p 146 N93-19774
- A systems approach to the advanced aircraft man-machine interface p 146 N93-19776
- Treatment of human-computer interface in a decision support system [DE93-002281] p 237 N93-24502
- Measures of user-system interface effectiveness: An encoding scheme and indicators for assessing the usability of graphical, direct-manipulation style user interfaces [AD-A260606] p 265 N93-25840
- Man-systems distributed system for Space Station Freedom p 312 N93-27788
- EVA/manned systems p 312 N93-27789
- Evolving technologies for Space Station Freedom computer-based workstations p 313 N93-27794
- Man-systems integration and the man-machine interface p 313 N93-27795
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 N93-28850
- The design and development of the new RAF standard HUD format p 318 N93-28856
- MANAGEMENT**
- Flight physiology - Clinical considerations p 164 A93-28690
- MANAGEMENT INFORMATION SYSTEMS**
- Treatment of human-computer interface in a decision support system [DE93-002281] p 237 N93-24502
- MANAGEMENT METHODS**
- The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769
- Organizational politics, participation in decision-making, and job satisfaction [DOT/FAA/AM-92/17] p 257 N93-25203
- Performance measurement systems: A best practices study [AD-A262180] p 350 N93-29444
- MANAGEMENT PLANNING**
- The real world and lunar base activation scenarios p 68 N93-14014
- Space human factors discipline science plan [NASA-TM-108023] p 194 N93-21370
- Human Factors Issues in Aircraft Maintenance and Inspection: Science, technology, and management: A program review [PB93-146975] p 234 N93-23647
- MANAGEMENT SYSTEMS**
- Design of biomass management systems and components for closed loop life support systems p 351 N93-29728
- MANIPULATORS**
- Space based robot manipulators - Dynamics of contact and trajectory planning for impact minimization p 135 A93-22827
- Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846
- Research and development of sensing and manipulation techniques for space robotics on a testbed [AIAA PAPER 93-0794] p 136 A93-24873
- Characteristics and requirements of robotic manipulators for space operations p 182 A93-27003
- Initial experiments on the end-point control of a 2-DOF long-reach elastic manipulator p 183 A93-27024
- Knowledge-based task planning for the Special Purpose Dexterous Manipulator p 191 A93-29110
- Safety issues of manipulator systems under computer control p 192 A93-29121
- On the control of a class of flexible manipulators using feedback linearization approach p 231 A93-31533
- Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598
- A manipulator control testbed - Implementation and applications [AAS PAPER 92-054] p 392 A93-50594
- Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot [AIAA PAPER 93-3863] p 392 A93-51449
- Motion planning of a dual-arm free-floating manipulator with inertially fixed base [AIAA PAPER 93-3864] p 393 A93-51450
- A space manipulator with inertially fixed base? [AIAA PAPER 93-3866] p 393 A93-51452
- Machine vision in space p 395 A93-52641
- Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator p 407 A93-53038
- Optimal manipulator trajectories for space robots [AAS PAPER 91-669] p 410 A93-55838
- Telemanipulation experiment using predictive display p 411 A93-56256
- Initial experiments with a myoelectric-based muscle sensor [DE92-016034] p 237 N93-25099
- Modeling of a full vision system using combined Visual/Haptic search for remote object identification [AD-A260977] p 266 N93-25867
- Man-machine cooperation in advanced teleoperation p 366 N93-32106
- Interactive and cooperative sensing and control for advanced teleoperation p 366 N93-32108
- TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development p 367 N93-32112
- MANNED MARS MISSIONS**
- Human support for Mars exploration - Issues and approaches p 27 A93-12077
- Radiation exposure predictions for long-duration-stay Mars missions [AIAA PAPER 92-4584] p 28 A93-13288
- Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817
- Radiation exposure predictions for short-duration stay Mars missions [AAS PAPER 92-107] p 277 A93-39261
- Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management [SAE PAPER 921119] p 290 A93-41311
- An assessment of waste processing/resource recovery technologies for lunar/Mars life applications [SAE PAPER 921271] p 300 A93-41441
- A hybrid regenerative water recovery system for lunar/Mars life support applications [SAE PAPER 921276] p 301 A93-41445
- Space Station and lunar/Mars life support research p 346 A93-42122
- A voyage to Mars: A challenge to collaboration between man and machines Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 N93-18156
- Space life support engineering program [NASA-CR-192188] p 141 N93-19039
- Mars habitat p 352 N93-29747
- MANNED ORBITAL LABORATORIES**
- The European astronauts training programme p 226 N93-24346
- MANNED REENTRY**
- Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system [NASA-TM-104769] p 321 N93-29044
- MANNED SPACE FLIGHT**
- To the stars with the cytoskeleton? p 1 A93-11198
- Supporting human exploration in space - Biomedical research p 48 A93-17428
- K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions p 90 A93-18406
- K.E. Tsiolkovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409
- Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410
- Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411
- Physical fitness as a criterion of readiness for spaceflights p 98 A93-18412
- Biomedical engineering and space p 103 A93-20015
- Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658
- Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309
- Task-analytic evaluations of Space Station Freedom workstations p 187 A93-27157
- Crew performance in Spacelab p 176 A93-27169
- Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689
- A physician's workstation designed for NASA and earth-based applications p 189 A93-28695
- Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715
- Cardiovascular physiology - Effects of microgravity p 166 A93-28719
- The overview effect - The impact of space exploration on the evolution of nursing science p 155 A93-28722
- Management of trauma and emergency surgery in space p 167 A93-28734
- Neurology of microgravity and space travel p 168 A93-28735

- Health in space - And on Earth p 156 A93-28738  
 Medical-care systems for long-duration space missions p 169 A93-28755  
 Skin care in the space environment p 170 A93-28756  
 Limitations to the study of man in space in the U.S. space program p 213 A93-30285  
 A review of muscle atrophy in microgravity and during prolonged bed rest p 213 A93-30771  
 Predicting skeletal adaptation in altered gravity environments p 213 A93-30772  
 The effects of prolonged weightlessness and reduced gravity environments on human survival p 214 A93-30773  
 Bioregenerative life support as self-sustaining ecosystem in space p 231 A93-32073  
 Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783  
 European astronaut candidates in training in the CIS p 256 A93-34593  
 Methodology for clinical testing of antiradiation means intended for manned space flight conditions p 249 A93-35236  
 Protein composition of the blood plasma of cosmonauts after lengthy orbital flights p 249 A93-35243  
 Space Station Freedom Environmental Health Care Program p 292 A93-41325  
 [SAE PAPER 921138] p 292 A93-41325  
 The psychological effects of isolation on a space station - A simulation study p 287 A93-41369  
 [SAE PAPER 921191] p 287 A93-41369  
 Crop interactions in polyculture and their implications for CELSS design p 295 A93-41373  
 [SAE PAPER 921197] p 295 A93-41373  
 A trade study method for determining the design parameter of CELSS subsystems p 295 A93-41374  
 [SAE PAPER 921198] p 295 A93-41374  
 Instrumentation for microbial monitoring of decontamination or biocide system effectiveness p 297 A93-41407  
 [SAE PAPER 921233] p 297 A93-41407  
 Advanced life support systems in lunar and Martian environments utilizing a higher plant based engineering paradigm p 302 A93-41452  
 [SAE PAPER 921286] p 302 A93-41452  
 Consumables and wastes estimations for the First Lunar Outpost p 302 A93-41453  
 [SAE PAPER 921287] p 302 A93-41453  
 Biofilm formation and control in a simulated spacecraft water system - Three year results p 303 A93-41472  
 [SAE PAPER 921310] p 303 A93-41472  
 Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey p 306 A93-41509  
 [SAE PAPER 921350] p 306 A93-41509  
 Shielding strategies for human exploration missions p 308 A93-41534  
 [SAE PAPER 921376] p 308 A93-41534  
 First entry operations for spacecraft p 308 A93-41542  
 [SAE PAPER 921384] p 308 A93-41542  
 Potential health hazards from thermal degradation events - Particulate vs. gas phase effects p 282 A93-41546  
 [SAE PAPER 921388] p 282 A93-41546  
 Design and preliminary testing of a membrane based water recycling system for European manned space missions p 309 A93-41553  
 [SAE PAPER 921396] p 309 A93-41553  
 An operational evaluation process for long-duration mission habitats in space p 345 A93-42114  
 An integrated human/plant metabolic mass balance model p 347 A93-42130  
 Problems of respiratory physiology during space flight p 332 A93-44849  
 Space Station Freedom payload operations in the 21st century p 350 A93-45436  
 Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401  
 Pre-adaptation to shiftwork in space p 386 A93-52403  
 Medical concerns for exploration-class missions p 386 A93-52409  
 Meeting human needs p 400 A93-54306  
 [AAS PAPER 91-313] p 400 A93-54306  
 Life support systems p 409 A93-54308  
 [AAS PAPER 91-320] p 409 A93-54308  
 Remote medical systems for the human exploration of space p 401 A93-54309  
 [AAS PAPER 91-321] p 401 A93-54309  
 NASA's manned space flight program p 402 A93-55805  
 [AAS PAPER 91-626] p 402 A93-55805  
 DoD space radiation concerns p 13 A93-10613  
 [AD-A253135] p 13 A93-10613  
 Annual report p 105 A93-16840  
 [NASA-CR-191389] p 105 A93-16840  
 Protective helmet assembly p 106 A93-17088  
 [NASA-CASE-MS-C-21842-1] p 106 A93-17088  
 Study on environment control and life support technology p 149 A93-20413  
 Evolving EVA system capability for the evolving Space Station Freedom requirements p 312 A93-27791  
 Simplified Aid For Crew Rescue (SAFR) p 313 A93-27793  
 Manned systems technology discipline p 314 A93-27860  
**MANNED SPACECRAFT**  
 TRIALSS - Tool for Rapid and Intelligent Advanced Life Support System Selection and Sizing p 291 A93-41315  
 [SAE PAPER 921123] p 291 A93-41315  
 Catalytic oxidation for treatment of ECLSS and PMMS waste streams --- Process Material Management Systems p 301 A93-41443  
 [SAE PAPER 921274] p 301 A93-41443  
 Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization p 309 A93-41549  
 [SAE PAPER 921391] p 309 A93-41549  
 Manned Space-Laboratories Control Centre (MSCC) training p 339 A93-43330  
 EVA/manned systems p 312 A93-27789  
 Manned systems technology discipline p 314 A93-27860  
 Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 A93-28032  
 Computerized atmospheric trace contaminant control simulation for manned spacecraft p 321 A93-28977  
 [NASA-TM-108409] p 321 A93-28977  
**MANPOWER**  
 Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool p 195 A93-21753  
 [AD-A258531] p 195 A93-21753  
 Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools p 363 A93-32011  
 [AD-A264571] p 363 A93-32011  
**MANUAL CONTROL**  
 Relationship between ERP and workload in manual control p 30 A93-13721  
 Decrement in manual arm performance during whole body cooling p 88 A93-18038  
 A force-reflecting teleoperated hand system for the study of tactile sensing in precision manipulation p 263 A93-35536  
 A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object p 364 A93-45685  
 Operator performance with alternative manual control modes in teleoperation p 390 A93-49397  
 Coordinated action in 3-D space p 31 A93-10994  
 [AD-A249830] p 31 A93-10994  
 Architecture of autonomous systems p 266 A93-26047  
 [NASA-CR-192974] p 266 A93-26047  
 Handedness and motor programming effects of manual control and movement p 340 A93-30027  
 [AD-A264022] p 340 A93-30027  
**MANUALS**  
 Life Support and Habitability Manual ESA PSS-03-406 p 305 A93-41497  
 [SAE PAPER 921338] p 305 A93-41497  
**MARINE BIOLOGY**  
 Phytoplankton photosynthesis in natural mixed layers p 39 A93-12871  
 [AD-A255010] p 39 A93-12871  
 How do zooplankton feed? A critical microgravity experiment p 158 A93-21097  
 Gravity as a factor in the orientation and vertical migration of marine zooplankton p 158 A93-21098  
**MARINE CHEMISTRY**  
 Chemical environments of submarine hydrothermal systems --- supporting abiogenetic theory p 74 A93-18005  
 An experimental approach to chemical evolution in submarine hydrothermal systems p 74 A93-18008  
 Photo and thermal reactions of ferrous hydroxide --- formation of hydrogen in Archaean ocean relevant to chemical origin of life p 269 A93-36561  
 Hydrothermal dehydration of aqueous organic compounds p 397 A93-53291  
**MARINE METEOROLOGY**  
 Marine microbial production of dimethylsulfide from dissolved dimethylsulfoxide p 330 A93-30665  
 [NASA-CR-193278] p 330 A93-30665  
**MARINE TECHNOLOGY**  
 Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights p 341 A93-30426  
 [AD-A264626] p 341 A93-30426  
**MARKOV CHAINS**  
 JPRS report: Science and technology. Central Eurasia: Life sciences p 244 A93-25406  
 [JPRS-ULS-92-020] p 244 A93-25406  
**MARS (PLANET)**  
 Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377  
 The real world and lunar base activation scenarios p 68 A93-14014  
 Mars: A reassessment of its interest to biology p 113 A93-18550  
**MARS ATMOSPHERE**  
 Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411  
 Mitigation of dust contamination during EVA operations on the moon and Mars p 345 A93-42107  
**MARS ENVIRONMENT**  
 The possibility of life on Mars during a water-rich past p 196 A93-27887  
 A study to explore locomotion patterns in partial gravity environments p 293 A93-41340  
 [SAE PAPER 921157] p 293 A93-41340  
 ASDA - Advanced Suit Design Analyzer computer program p 308 A93-41539  
 [SAE PAPER 921381] p 308 A93-41539  
 An analysis of human performance in simulated partial-gravity environments p 347 A93-42173  
 Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406  
 Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 p 140 A93-18156  
 [NASA-CR-192042] p 140 A93-18156  
 Mars: A reassessment of its interest to biology p 113 A93-18550  
**MARS LANDING**  
 Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410  
 Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 p 140 A93-18156  
 [NASA-CR-192042] p 140 A93-18156  
**MARS SURFACE**  
 The possibility of life on Mars during a water-rich past p 196 A93-27887  
 Pressure suit requirements for moon and Mars EVA's p 346 A93-42123  
 Artificial gravity augmentation on the moon and Mars p 346 A93-42127  
 An integrated human/plant metabolic mass balance model p 347 A93-42130  
 Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877  
 Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 p 140 A93-18156  
 [NASA-CR-192042] p 140 A93-18156  
**MASKING**  
 Auditory perception p 23 A93-12469  
 [AD-A255061] p 23 A93-12469  
 Spatio-temporal masking: Hyperacuity and local adaptation p 121 A93-18006  
 [AD-A257934] p 121 A93-18006  
 Auditory spectro-temporal pattern analysis p 361 A93-31981  
 [AD-A264691] p 361 A93-31981  
**MASKS**  
 Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) p 30 A93-10217  
 [AD-A253393] p 30 A93-10217  
 Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21) p 30 A93-10288  
 [AD-A253394] p 30 A93-10288  
 Evaluation of multilayer mask concept for RESPO 21 p 33 A93-12079  
 [AD-A253392] p 33 A93-12079  
 Evaluation and optimization of a flexible filtration system for respiratory protection system 21 p 284 A93-28758  
 [AD-A262467] p 284 A93-28758  
**MASS**  
 A body mass measurement device based on the oscillation principle p 221 A93-24400  
**MASS SPECTROMETERS**  
 Design of ion source of respiratory mass spectrometer p 11 A93-13713  
**MASSIVELY PARALLEL PROCESSORS**  
 Temporal Frequency Spectrum for describing and modeling motion perception p 232 A93-33250  
 Simulation of excitatory/inhibitory interactions in single auditory neurons p 50 A93-13252  
 [AD-A253614] p 50 A93-13252  
**MATERIAL BALANCE**  
 Recycling and source reduction for long duration space habitation p 290 A93-41313  
 [SAE PAPER 921121] p 290 A93-41313  
**MATERIALS HANDLING**  
 Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 A93-23070  
**MATERIALS TESTS**  
 Biodeterioration of materials in water reclamation systems p 303 A93-41473  
 [SAE PAPER 921311] p 303 A93-41473  
**MATHEMATICAL LOGIC**  
 Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA p 321 A93-28942  
 [DE93-001923] p 321 A93-28942

**MATHEMATICAL MODELS**

- The dynamic mathematical model and digital simulation of the environmental control system p 61 A93-14319
- Comparative test data assessment and simplified math modelling for Sabatier CO<sub>2</sub> reduction subsystem [SAE PAPER 921228] p 296 A93-41402
- Development of physical and mathematical models for the Porous Ceramic Tube Plant Nitrification System (PCTPNS) [NASA-TM-107551] p 4 N93-10085
- Self-programming of matter and the evolution of proto-biological organizations [DE92-015244] p 5 N93-10628
- Visual perception of structure from motion [AD-A253235] p 26 N93-11503
- Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H [AD-A254939] p 63 N93-12545
- Formal aspects of human-computer interaction p 66 N93-13909
- The relationship between environmental conditions and UH-60 cockpit temperature [AD-A255918] p 69 N93-14090
- Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962
- Mathematics and biology: The interface, challenges and opportunities [DE92-041207] p 82 N93-17359
- Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 N93-17971
- Toward the ideal military aviation sunglasses [AD-A258200] p 140 N93-18200
- Decision paths in complex tasks [NASA-CR-192121] p 132 N93-18359
- Titan p 114 N93-18553
- Retinal modeling: Segmenting motion from spatio-temporal inputs using neural networks [AD-A258854] p 125 N93-19369
- Occupant simulation as an aspect of flight safety research p 142 N93-19665
- Medical evaluation of spatial disorientation mishaps p 134 N93-19703
- Optimal design of composite hip implants using NASA technology p 174 N93-22188
- Integrated oxygen recovery system [NASA-CR-192343] p 234 N93-22663
- Analysis and synthesis of adaptive neural elements and assemblies [AD-A259954] p 219 N93-24247
- Anatomy and physiology of plant conductive systems [PB93-156032] p 245 N93-25877
- 1991 NASA Life Support Systems Analysis workshop [NASA-CR-4466] p 310 N93-27100
- 1992 NASA Life Support Systems Analysis workshop [NASA-CR-4467] p 310 N93-27101
- Marshall Space Flight Center ECLSS technology activities p 312 N93-27724
- Biophysical model for handwear insulation testing [AD-A262926] p 320 N93-28884
- MATRICES (MATHEMATICS)**
- A robust model for finding optimal evolutionary trees [DE93-010682] p 330 N93-30483
- MAXIMUM LIKELIHOOD ESTIMATES**
- Statistically based decompression tables 8: Linear-exponential kinetics [AD-A257613] p 120 N93-17926
- MAZE LEARNING**
- Analyzing the path of responding in maze-solving and other tasks p 202 A93-32652
- MEASURING INSTRUMENTS**
- Transcutaneous Analyte Measuring Methods (TAMM), phase 2 [AD-A256327] p 54 N93-15192
- A body mass measurement device based on the oscillation principle p 221 N93-24400
- MECHANICAL DEVICES**
- Portable seat lift [NASA-CASE-MFS-28610-1] p 106 N93-17045
- MECHANIZATION**
- The strategic role of automation and robotics for Columbus utilization p 181 A93-26567
- MEDICAL EQUIPMENT**
- Cerebral blood flow - Comparison of ground-based and spaceflight data and correlation with space adaptation syndrome p 87 A93-17553
- Biomedical engineering and space\* p 103 A93-20015
- Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 N93-11279
- Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566

- A health care system for the Space Station [NASA-TM-108093] p 65 N93-13571
- Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s [AD-A255691] p 52 N93-14103
- Improved head support stand adjustable by compound turnbuckle [AD-D015384] p 55 N93-15249
- Cardiovascular stress test with non-invasive techniques p 221 N93-24399
- Automated system for early breast cancer detection in mammograms p 253 N93-25568
- Transcutaneous analyte measuring methods [AD-A262861] p 333 N93-29509
- MEDICAL PERSONNEL**
- The overview effect - The impact of space exploration on the evolution of nursing science p 155 A93-28722
- Guide for aviation medical examiners [PB92-219690] p 172 N93-21047
- MEDICAL PHENOMENA**
- A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321
- MEDICAL SCIENCE**
- The overview effect - The impact of space exploration on the evolution of nursing science p 155 A93-28722
- Center of Excellence in laser medicine [DE92-018760] p 22 N93-11445
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-024] p 40 N93-13033
- Walter Reed Army Institute of Research biannual report [AD-A255630] p 52 N93-14162
- Transcutaneous Analyte Measuring Methods (TAMM), phase 2 p 54 N93-15192
- Aviation medicine research: A historical review [AD-A258198] p 121 N93-18217
- Commercial opportunities in bioprocesses and physiological testing aboard Space Station Freedom p 206 N93-22649
- Achieving the promise of the bioscience revolution: The role of the Federal Government [PB93-139970] p 244 N93-25457
- Hyperbaric treatment p 360 N93-31454
- An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine [AD-A265497] p 360 N93-31917
- MEDICAL SERVICES**
- Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411
- Using GOMS models and hypertext to create representations of medical procedures for online display p 188 A93-27170
- Flight physiology - Clinical considerations p 164 A93-28690
- A physician's workstation designed for NASA and earth-based applications p 189 A93-28695
- Health services at the Kennedy Space Center p 154 A93-28711
- Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712
- Management of trauma and emergency surgery in space p 167 A93-28734
- Medical-care systems for long-duration space missions p 169 A93-28755
- Skin care in the space environment p 170 A93-28756
- Mechanisms of immune failure in burn injury p 15 N93-11285
- Walter Reed Army Institute of Research biannual report [AD-A255630] p 52 N93-14162
- A paradigm shift in Air Force medicine [AD-A258334] p 121 N93-18159
- X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 N93-18295
- Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707
- Automated system for early breast cancer detection in mammograms p 253 N93-25568
- Medical aspects of cold weather operations: A handbook for medical officers [AD-A263559] p 336 N93-30588
- Health maintenance facility system effectiveness testing [NASA-TM-104737] p 372 N93-32328
- MELANIN**
- Investigation of laser-induced retinal damage [AD-A264096] p 338 N93-31094

**MEMBRANES**

- Development of membrane gas removal technology for microgravity liquid flow systems [SAE PAPER 921162] p 294 A93-41344
- Membrane technology for zero gravity life support systems [SAE PAPER 921320] p 304 A93-41482
- Modeling of membrane processes for air revitalization and water recovery [SAE PAPER 921352] p 306 A93-41511
- High-recovery low-pressure reverse osmosis [SAE PAPER 921353] p 306 A93-41512
- Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553
- Experimental and theoretical study on membrane distillation using thermopervaporation [SAE PAPER 921397] p 309 A93-41554
- The role of central monoaminergic systems in arousal and selective attention [AD-A258500] p 122 N93-18264
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers [NASA-CR-177602] p 149 N93-20065
- Kinetic studies of interfacial photocurrents in platinized chloroplasts [DE93-002344] p 211 N93-25104
- Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764
- Membrane technology: A search for membranes for submarine atmosphere control [AD-A260581] p 266 N93-25904
- The chronic effects of pB-jet fuel exposure on the lungs [AD-A264162] p 334 N93-30153
- MEMORY**
- Aging, expertise, and narrative processing p 180 A93-28724
- Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures p 405 A93-55348
- Neuromagnetic investigations of cortical regions underlying short-term memory [AD-A255788] p 58 N93-14646
- Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962
- Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks [AD-A257711] p 100 N93-17684
- Comparing performance on implicit memory tests [AD-A26168] p 131 N93-17921
- The central executive component of working memory [AD-A258724] p 135 N93-20326
- A cognitive architecture for human performance process model research [AD-A261040] p 258 N93-25815
- Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 N93-26521
- How expert pilots think: Cognitive processes in expert decision making [DOT/FAA/RD-93/9] p 288 N93-27103
- Analysis of neural systems involved in modulation of memory storage [AD-A262418] p 283 N93-27654
- Representations of shape in object recognition and long-term visual memory [AD-A264342] p 341 N93-30163
- The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 N93-31233
- MENINGITIS**
- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303
- Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304
- MENSTRUATION**
- Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165
- MENTAL HEALTH**
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 N93-11299
- Life support and self-sufficiency in space communities p 105 N93-16866
- MENTAL PERFORMANCE**
- Doing two things at the same time p 180 A93-27817



- Aging, expertise, and narrative processing p 180 A93-28724
- Effect of task complexity on mental performance during immersion hypothermia p 211 A93-30279
- Neurobehavioral test in civil aviation flight personnel p 223 A93-30443
- The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241
- Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses p 13 A93-10661
- [AD-A254129] p 13 A93-10661
- Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1 [AD-A254138] p 25 A93-10662
- NASA Space Human Factors Program [NASA-TM-108005] p 31 A93-10890
- Relating cognitive function to military aviator performance in early HIV infection p 17 A93-11298
- A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity [AD-A255926] p 52 A93-14109
- Sleep inertia: Is there a worst time to wake up? [AD-A256602] p 52 A93-14240
- Cognitive and affective components of mental workload: Understanding the effects of each on human decision making behavior p 99 A93-16783
- Enhanced performance using physiological feedback [AD-A258006] p 130 A93-17816
- An analysis of a sustained flight operation training mission in Navy attack aircraft [AD-A258199] p 131 A93-18205
- The effects of iconic presentation on individuals [AD-A258785] p 133 A93-18949
- Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 A93-19707
- Modeling the dynamics of mental workload and human performance in complex systems [AD-A258553] p 135 A93-19956
- A cognitive architecture for human performance process model research [AD-A261040] p 258 A93-25815
- Simulated sustained flight operations and performance. Part 1: Effects of fatigue [AD-A261012] p 266 A93-25859
- Facilitation and interference in identification of pictures and words p 260 A93-26356
- [AD-A261484] p 260 A93-26356
- Physiological indices of mental workload [AD-A261692] p 260 A93-26391
- Duration of alpha suppression increases with angle in a mental rotation task p 260 A93-26435
- [AD-A261592] p 260 A93-26435
- Expertise, text coherence, and constraint satisfaction: Effects on harmony and settling rate --- mental representations [AD-A262703] p 288 A93-28901
- Predicting aircrew training performance with psychometric g [AD-A264021] p 340 A93-30026
- Representations of shape in object recognition and long-term visual memory [AD-A264342] p 341 A93-30163
- The air traffic controller's mental model and its implications for equipment design and trainee selection p 341 A93-30322
- Computer-generated parallel tests for aptitude measurement in the selection of aviation operators [DLR-FB-92-29] p 343 A93-31229
- Background and objectives of the PARAT program p 343 A93-31230
- The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 A93-31233
- The concentration loading test system: A computer generated process for acquisition of attentiveness control p 344 A93-31235
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 A93-31236
- The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 A93-31237
- The PARAT tests as examination system p 344 A93-31238
- Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 A93-32269

## MESONS

- A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935

## METABOLIC DISEASES

- Cellular and tissue injury during nonfreezing cold injury and frostbite [AD-A260574] p 254 A93-25900

## METABOLISM

- Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442
- Metabolic changes observed in astronauts p 84 A93-17535
- Energy expenditure climbing Mt. Everest p 92 A93-20031
- Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679
- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 153 A93-28691
- Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720
- Atrial natriuretic peptide degradation by CPA47 cells - Evidence for a divalent cation-independent cell-surface proteolytic activity p 155 A93-28726
- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728
- Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity p 168 A93-28736
- Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743
- Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands p 156 A93-28746
- Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission) p 200 A93-32071
- Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254
- Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide p 271 A93-39707
- Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921122] p 291 A93-41314
- Metabolic responses to simulated extravehicular activity [SAE PAPER 921303] p 282 A93-41468
- An integrated human/plant metabolic mass balance model p 347 A93-42130
- Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49218
- Metabolic factors influencing myocardial recovery from acidosis (CIC3) [AD-A252376] p 14 A93-10796
- Allergic and nonallergic rhinitis in Greek pilots p 21 A93-11317
- Kinetic tetrazolium microtiter assay [NASA-CASE-MSC-21979-1] p 82 A93-17049
- Biotechnical production and use of pyruvic acid with special reference to coenzyme regeneration [VTT-PUBS-77] p 209 A93-23369
- Cellular and tissue injury during nonfreezing cold injury and frostbite [AD-A260574] p 254 A93-25900
- Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 A93-26066
- SPE water electrolyzers in support of the lunar outpost p 315 A93-27977
- Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 A93-28759
- Regulation of alternative CO2 fixation pathways in prokaryotic and eukaryotic photosynthetic organisms [DE93-012109] p 276 A93-29181
- Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 A93-29620
- Beta-adrenergic blockade and lactate metabolism during exercise at high altitude [AD-A263544] p 334 A93-29820
- Trial of emergency ration of the Spanish Air Force p 368 A93-32247

## METABOLITES

- Experimental study of volatile metabolites of human body p 11 A93-13711
- Tyrosine - Effects on catecholamine release p 204 A93-33038
- New techniques for positron emission tomography in the study of human neurological disorders [DE92-015353] p 23 A93-11873

## METAL HALIDES

- Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent fluorescent radiation p 357 A93-46469

## METAL IONS

- Principles of the organization of calcium metabolism p 7 A93-10124
- Ribozymes - A distinct class of metalloenzymes p 398 A93-54163

## METAL OXIDES

- Development of a regenerable metal oxide sheet matrix CO2 removal system [SAE PAPER 921298] p 302 A93-41463
- Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing [SAE PAPER 921299] p 303 A93-41464

## METEORITIC COMPOSITION

- Comet impacts and chemical evolution on the bombarded earth p 109 A93-17980
- The origin of the polycyclic aromatic hydrocarbons in meteorites p 110 A93-17983
- Comment on 'Summary and implications of reported amino acid concentrations in the Murchison meteorite' by E. L. Shock and M. D. Schulte p 412 A93-53294

## METEOROLOGICAL RADAR

- Validity of clinical color vision tests for air traffic control specialists [AD-A258219] p 123 A93-18301

## METHANE

- Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake p 38 A93-16544

## METHODOLOGY

- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 A93-12211

## METHYL COMPOUNDS

- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 153 A93-28691

## MICE

- Photoreceptors regulating circadian behavior: A mouse model [AD-A264881] p 337 A93-30908

## MICROBIOLOGY

- A microfermentation test for the rapid identification of yeasts p 156 A93-28733
- Microbiology operations and facilities aboard restructured Space Station Freedom [SAE PAPER 921213] p 296 A93-41389
- Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390
- Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight [SAE PAPER 921232] p 297 A93-41406
- Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877
- Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters [NASA-TM-108375] p 6 A93-12174
- ECLSS medical support activities [NASA-CR-184429] p 23 A93-12427
- Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 A93-12966
- Kinetic tetrazolium microtiter assay [NASA-CASE-MSC-21979-1] p 82 A93-17049
- Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle [NASA-CR-4497] p 269 A93-26157
- Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols [NASA-CR-192570] p 359 A93-32354
- Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems [NASA-CR-192571] p 359 A93-32365

## MICROCLIMATOLOGY

- Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment [AD-A258502] p 129 A93-20400
- Evaluation of two microclimate cooling air vests on a heated mannequin [AD-A259410] p 194 A93-21269

## MICROELECTRONICS

- Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays p 102 A93-19987

## MICROFIBERS

Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 N93-27989

## MICROGRAVITY

Hematological changes in space microgravity environments p 46 A93-15528

Microgravity flight testing of a laboratory robot [AAS PAPER 91-035] p 62 A93-15583

The current status and prospects in the study of cell physiology under microgravity p 38 A93-16001

Accuracy of aimed arm movements in changed gravity p 56 A93-16159

Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419

Altered cell function in microgravity p 79 A93-20660

Cellular immunosenescence - An overview p 80 A93-20663

Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700

Energetics of walking and running - Insights from simulated reduced-gravity experiments p 116 A93-21687

Short-term microgravity to isolate graviperception in cells p 111 A93-21901

Moistening of the substrate in microgravity p 135 A93-21906

Animal surgery in microgravity p 112 A93-24047

Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206

Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space p 130 A93-25207

Study design for microgravity human physiology experiments p 118 A93-25208

Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548

Swimming behavior of the unicellular flagellate, Euglena gracilis, in simulated and real microgravity p 151 A93-26549

COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569

AUDIMIR - Directional hearing at microgravity p 159 A93-26570

OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571

Influence of microgravity on immune system and genetic information p 160 A93-26572

Evaluating robot procedures and tasks for the flight telerobotic servicer p 187 A93-27156

Crew performance in Spacelab p 176 A93-27169

Dynamics of the controlled environment conditions in 'SVET' greenhouse in flight p 152 A93-27460

Aseptic technique in microgravity p 168 A93-28737

Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750

Microgravity and bone adaptation at the tissue level p 170 A93-28761

Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765

An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137

Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280

Limitations to the study of man in space in the U.S. space program p 213 A93-30285

Cardiovascular problems during space flight p 213 A93-30445

A review of muscle atrophy in microgravity and during prolonged bed rest p 213 A93-30771

Predicting skeletal adaptation in altered gravity environments p 213 A93-30772

The effects of prolonged weightlessness and reduced gravity environments on human survival p 214 A93-30773

Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission) p 200 A93-32071

Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072

The Biological Flight Research Facility p 239 A93-34581

Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207

Healing of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260

Interlabyrinth otolithic asymmetry under normal conditions and after the effect of a gravity change p 242 A93-35264

8-OH-DPAT does not interfere with habituation to motion-induced emesis in cats p 271 A93-38451

Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710

Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715

Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716

Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773

Simulating reduced gravity - A review of biomechanical issues pertaining to human locomotion p 289 A93-41175

Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327

Pilot investigation - Nominal crew induced forces in zero-g [SAE PAPER 921155] p 293 A93-41338

A study to explore locomotion patterns in partial gravity environments [SAE PAPER 921157] p 293 A93-41340

Design of a Shuttle air and water prefilter for reduced gravity operation [SAE PAPER 921161] p 294 A93-41343

Development of membrane gas removal technology for microgravity liquid flow systems [SAE PAPER 921162] p 294 A93-41344

Two phase fluid management for hydroponics [SAE PAPER 921163] p 294 A93-41345

Conceptual design of ECLSS microgravity test beds [SAE PAPER 921164] p 294 A93-41346

A novel membrane device for the removal of water vapor and water droplets from air [SAE PAPER 921322] p 304 A93-41484

Design and evaluation of a payload to support plant growth onboard COMET 1 [SAE PAPER 921389] p 308 A93-41547

The General Purpose Work Station, a spacious microgravity workbench [SAE PAPER 921394] p 309 A93-41552

Experimental and theoretical study on membrane distillation using thermopervaporation [SAE PAPER 921397] p 309 A93-41554

Medical care on the moon p 331 A93-42126

Artificial gravity augmentation on the moon and Mars p 346 A93-42127

An analysis of human performance in simulated partial-gravity environments p 347 A93-42173

Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats p 323 A93-42192

Correlation between the lymph dynamics and venous pressure during short-term antiothostatic effects p 325 A93-43070

Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179

Habituation to feline motion sickness p 328 A93-44900

Effects of a microgravity environment on the crystallization of biological macromolecules p 357 A93-45995

Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177

Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report p 375 A93-49206

The simulation of microgravity conditions on the ground --- and biological effects of weightlessness p 375 A93-49207

How well does the clinostat mimic the effect of microgravity on plant cells and organs? p 376 A93-49213

Physical and digital simulations for IVA robotics p 391 A93-49445

The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410

Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity p 386 A93-52617

Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328

NASA Space Human Factors Program [NASA-TM-108005] p 31 N93-10890

Space flight and immune system p 14 N93-11284

Establishing laboratory standards for biological flight experiments [NASA-CR-184402] p 40 N93-12901

A study of the effects of micro-gravity on seed germination p 40 N93-13167

Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 N93-13449

Bone loss and human adaptation to lunar gravity p 51 N93-14002

Passive zero-gravity leg restraint [NASA-CASE-ARC-11882-1-CU] p 70 N93-14713

STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission [NASA-TM-108034] p 80 N93-15823

Autonomous support for microorganism research in space [NASA-CR-192062] p 83 N93-17780

Design of a resistive exercise device for use on the Space Shuttle [NASA-CR-192079] p 108 N93-17805

Investigation of wheat coleoptile response to phototropic stimulations [NASA-CR-192157] p 114 N93-18608

A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES) [NASA-CR-192219] p 114 N93-19377

Biomedical Monitoring and Countermeasures Facility p 205 N93-22624

Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628

Zero-G life support for Space Station Freedom p 233 N93-22640

Commercial opportunities in bioseparations and physiological testing aboard Space Station Freedom p 206 N93-22649

Materials dispersion and biodynamics project research p 207 N93-22651

Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 N93-24366

Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367

Influence of microgravity on immune system and genetic information p 220 N93-24370

The USO-concept applied to a biological model experiment p 210 N93-24379

Gravity and root morphogenesis p 210 N93-24403

Development of Arabidopsis thaliana grown under microgravity conditions p 211 N93-24404

Investigation of the effects of Extra Vehicular Activity (EVA) and Launch and Entry (LES) gloves on performance p 266 N93-26061

The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068

Growth factor involvement in tension-induced skeletal muscle growth [NASA-CR-193023] p 282 N93-27113

Electrophoretic separation of cells and particles from rat pituitary and rat spleen [NASA-CR-193073] p 276 N93-28415

Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1) p 284 N93-28740

Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2) p 284 N93-28741

Effect of microgravity on the visual near point: Visual Function Tester-Model 4 (VFT-4) p 284 N93-28742

NASA supporting studies for microgravity research on eye movements [NASA-CR-193233] p 285 N93-29041

Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system [NASA-TM-104769] p 321 N93-29044

Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 N93-29651

Vibration isolation p 365 N93-31458

**MICROMECHANISMS**

Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 N93-22800

**MICROMETEORIODS**

Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems [SAE PAPER 921258] p 299 A93-41428

**MICROORGANISMS**

Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms p 101 A93-18418

The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of Methylococcus capsulatus (Bath) p 153 A93-28691

Microflora of cabins of manned space objects and the problem of biological damage to the structural materials used in them p 262 A93-35237

Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558

- Life in hot springs and hydrothermal vents  
p 243 A93-36559
- Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility  
[SAE PAPER 921214] p 273 A93-41390
- Instrumentation for microbial monitoring of decontamination or biocide system effectiveness  
[SAE PAPER 921233] p 297 A93-41407
- Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process  
[SAE PAPER 921234] p 297 A93-41408
- Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design  
[SAE PAPER 921277] p 301 A93-41446
- Contaminant distribution and accumulation in water recycle systems  
[SAE PAPER 921360] p 307 A93-41519
- Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408
- Deep-sea smokers - Windows to a subsurface biosphere? p 397 A93-53284
- Ozone - A new aspect of its effect on microorganisms p 398 A93-54971
- Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters  
[NASA-TM-108375] p 6 N93-12174
- ECSS medical support activities  
[NASA-CR-184429] p 23 N93-12427
- Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents  
[AD-A255696] p 42 N93-14557
- Ground testing of bioconvective variables such as morphological characterizations and mechanisms which regulate macroscopic patterns p 82 N93-17303
- Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] p 112 N93-18351
- Biochemically active layers for selective material detection sensors  
[MBB-Z-0440-92-PUB] p 158 N93-20959
- Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 N93-26066
- Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] p 276 N93-29174
- Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate  
[NASA-CR-193278] p 330 N93-30665
- Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment  
[FOA-A-40065-4.5] p 359 N93-32423
- MICROPHONES**
- Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)  
[AD-A253394] p 30 N93-10288
- MICROPROCESSORS**
- An automated version of the dichotic listening test: Hardware, software, and procedural details  
[AD-A258114] p 120 N93-17895
- MICROWAVE EQUIPMENT**
- Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570
- MICROWAVES**
- Microwaves and the visual analyzer p 250 A93-35247
- Mechanisms of microwave induced damage in biologic materials  
[AD-A255799] p 42 N93-14648
- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz  
[AD-A258136] p 120 N93-17985
- Mechanisms of microwave induced damage in biologic materials  
[AD-A264415] p 358 N93-32035
- MIDAIR COLLISIONS**
- The influence of flight experience on midair collision risk perception p 180 A93-28707
- MIDDLE EAR**
- Subjective reactions and objective assessment of the auditory and ventilatory functions of the middle ear during changes in atmospheric pressure p 45 A93-15174
- MILITARY AIRCRAFT**
- Human factors in design of military aircrafts' oxygen supply equipment p 60 A93-14222
- USAF/USN fixed wing night vision - The mission p 227 A93-30055
- Color helmet display for the tactical environment - The pilot's chromatic perspective p 227 A93-30058
- Military aircrew head support system p 231 A93-31944
- The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556
- MILITARY AVIATION**
- The pigmentary dispersion disorder in USAF aviators p 87 A93-18033
- Ethical concerns in the practice of military aviation medicine p 89 A93-18045
- Prospective assessment of stereoscopic visual status and USAF pilot training attrition p 116 A93-24039
- Prevalence of corrective lens wear in Royal Australian Air Force flight crews p 289 A93-41173
- The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training  
[AD-A258025] p 131 N93-17919
- Aviation medicine research: A historical review  
[AD-A258198] p 121 N93-18217
- MILITARY HELICOPTERS**
- Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots p 7 A93-10326
- Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330
- Documentation of activity and rest of a U.S. National Guard attack helicopter battalion p 9 A93-10338
- Army cockpit delethalization program p 61 A93-15419
- Helmet-mounted display for the night attack mission p 228 A93-30059
- Visual illusions and other effects with night vision devices p 230 A93-30072
- Helmet Mounted Display symbology integration research p 263 A93-35914
- An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission  
[AD-A254984] p 35 N93-12509
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue  
[AD-A257704] p 107 N93-17697
- MILITARY OPERATIONS**
- Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330
- Advanced displays for military operations  
[AIAA PAPER 92-4243] p 28 A93-13350
- Mishap trends and cause factors in naval aviation - A review of Naval Safety Center data, 1986-90 p 405 A93-55166
- DoD space radiation concerns p 13 N93-10613
- Relating flying hours to aircrew performance: Evidence for attack and transport missions  
[AD-A253988] p 25 N93-10719
- Mechanisms of immune failure in burn injury p 15 N93-11285
- AIDS/HIV in the US Military p 16 N93-11291
- Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292
- Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation  
[AD-A254328] p 23 N93-12145
- Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products  
[AD-A255224] p 51 N93-13941
- Thermal stress in US Air Force operations  
[AD-A255785] p 51 N93-14027
- Walter Reed Army Institute of Research biannual report  
[AD-A255630] p 52 N93-14162
- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm  
[AD-A258146] p 122 N93-18292
- The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm  
[AD-A258156] p 132 N93-18294
- A study of illness related lost time in transport aircraft crewmembers  
[AD-A258193] p 132 N93-18298
- Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise  
[AD-A259058] p 124 N93-19072
- Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations  
[AD-A259625] p 218 N93-24021
- Medical aspects of cold weather operations: A handbook for medical officers  
[AD-A263559] p 336 N93-30588
- C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265
- Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268
- MILITARY PSYCHOLOGY**
- Psychiatric diagnoses aboard an aircraft carrier p 57 A93-16162
- Relating cognitive function to military aviator performance in early HIV infection p 17 N93-11298
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 N93-11299
- MILITARY TECHNOLOGY**
- Looks can kill --- helmet mounted displays, military avionics p 231 A93-31626
- A systems approach to the advanced aircraft man-machine interface p 146 N93-19776
- Cognitive interface considerations for intelligent cockpits p 319 N93-28865
- System automation and pilot-vehicle-interface for unconstrained low-altitude night attack p 320 N93-28867
- A study of the effects of lens focal length on remote driver performance  
[AD-A263191] p 321 N93-28941
- TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development p 367 N93-32112
- MILLIMETER WAVES**
- The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system p 2 A93-12861
- MINERAL METABOLISM**
- Protection of *Acanthopanax senticosus* against suspension-induced bone loss in rats p 2 A93-13528
- Atrial natriuretic peptide degradation by CPA47 cells - Evidence for a divalent cation-independent cell-surface proteolytic activity p 155 A93-28726
- MINERALS**
- Mineral theories of the origin of life and an iron sulfide example p 74 A93-18009
- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] p 114 N93-19054
- MINIATURIZATION**
- Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080
- MINORITIES**
- Diversity in biological research  
[NSF-92-19] p 42 N93-13700
- MIR SPACE STATION**
- The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652
- Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238
- The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242
- Manipulator system for module redocking on the Mir Orbital Complex p 263 A93-35534
- Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401
- The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410
- Mir 1992 operations and crew training p 226 N93-24352
- Physiological experiments within the project AustroMir p 219 N93-24354
- Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363
- Japanese treefrog experiment onboard the Space Station Mir p 210 N93-24402
- MISSILE CONTROL**
- Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853
- MISSION PLANNING**
- Human support for Mars exploration - Issues and approaches p 27 A93-12077
- EVA operational guidelines and considerations for use during the Space Station Freedom design review process p 345 A93-42119
- Space Station Freedom payload operations in the 21st century p 350 A93-45436
- Pre-adaptation to shiftwork in space p 386 A93-52403
- The real world and lunar base activation scenarios p 68 N93-14014
- Development of a prototype interactive learning system using multi-media technology for mission independent training program p 100 N93-17310
- A systems approach to the advanced aircraft man-machine interface p 146 N93-19776

## SUBJECT INDEX

- Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032
- Lunar surface experiment system p 316 N93-28034
- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 N93-28855
- MITOCHONDRIA**
- The effects of cephalad body fluid redistribution on the ultrastructure of the vestibular apparatus of guinea pig p 4 A93-13717
- Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498
- Metabolic factors influencing myocardial recovery from acidosis (CiC3) [AD-A252376] p 14 N93-10796
- MITOSIS**
- Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662
- MOBILE COMMUNICATION SYSTEMS**
- Ground operation of the mobile servicing system on Space Station Freedom p 190 A93-29107
- MODELS**
- Hybrid 2 and hybrid 3 dummy neck properties for computer modeling [AD-A255544] p 66 N93-13874
- Development and enhancement of a model of performance and decision making under stress in a real life setting [AD-A255699] p 99 N93-16111
- Model-based reasoning applied to cockpit warning systems p 147 N93-19778
- MODERATORS**
- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables [AD-A254681] p 27 N93-12225
- MODULARITY**
- Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071
- MODULATION**
- Auditory spectro-temporal pattern analysis [AD-A264691] p 361 N93-31981
- MODULATION TRANSFER FUNCTION**
- Low-cost monochrome CRT helmet display p 228 A93-30061
- Comparison of CRT display measurement techniques p 229 A93-30067
- Quantitative Helmet Mounted Display system image quality model p 229 A93-30068
- MODULES**
- Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081
- MOISTURE CONTENT**
- Dew point analysis for Space Station Freedom [SAE PAPER 921227] p 296 A93-41401
- Development of physical and mathematical models for the Porous Ceramic Tube Plant Nutrifcation System (PCTPNS) [NASA-TM-107551] p 4 N93-10085
- Resource capture by single leaves [DE92-015847] p 5 N93-10461
- MOISTURE METERS**
- Moistening of the substrate in microgravity p 135 A93-21906
- MOLDS**
- Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388
- MOLECULAR BIOLOGY**
- Studies towards the crystallization of the rod visual pigment rhodopsin p 1 A93-11150
- Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity p 1 A93-11199
- Molecular mechanisms of stress --- of astronauts during various phases of their lunar and Martian travels p 49 A93-17443
- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation [DE92-018066] p 5 N93-10974
- Radiation physics, biophysics, and radiation biology [DE92-013673] p 6 N93-12266
- Molecular biology of anaerobic aromatic biodegradation [AD-A255213] p 42 N93-13863
- Mathematics and biology: The interface, challenges and opportunities [DE92-041207] p 82 N93-17359
- The solar system: Importance of research to the biological sciences p 113 N93-18547
- Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848

- Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 N93-28835
- The Gordon Research Conference on Pineal Cell Biology [AD-A264840] p 337 N93-30904
- MOLECULAR CLOUDS**
- Laboratory simulation of organic grain mantles p 268 A93-36554
- MOLECULAR STRUCTURE**
- Terrestrial and extraterrestrial sources of molecular homochirality p 110 A93-17986
- Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 153 A93-28698
- Atomic structure and chemistry of human serum albumin p 200 A93-31628
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 A93-32850
- The pineal gland - Its possible roles in human reproduction p 204 A93-33036
- Some proteins keep 'living fossil' pre-sequence p 244 A93-36562
- Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793
- Relationship between G + C in silent sites of codons and amino acid composition of human proteins p 358 A93-47099
- Ribozymes - A distinct class of metalloenzymes p 398 A93-54163
- Isolation of new ribozymes from a large pool of random sequences p 400 A93-56548
- MOLECULAR WEIGHT**
- Purification and properties of an ATPase from Sulfolobus solfataricus p 201 A93-32115
- Liquid water and the origin of life p 268 A93-36552
- MOLECULES**
- Radiation damage to DNA [DE92-015760] p 5 N93-10834
- The Moon: Biogenic elements p 113 N93-18548
- MOLLUSKS**
- Geography of end-Cretaceous marine bivalve extinctions p 273 A93-41075
- MOMENTS OF INERTIA**
- An automated method for determining mass properties [AD-A259924] p 236 N93-24441
- MONITORS**
- Methodology for ergonomic tests of the information display on monitor indicators p 101 A93-18530
- New technologies for in-flight tasteless bioelectrodes p 289 A93-41174
- Measurement of free and dissolved gas content of water samples on Space Station Freedom [SAE PAPER 921267] p 300 A93-41437
- Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s [AD-A255691] p 52 N93-14103
- Measuring hearing protection device performance using the metronics db-3100 sound level analyzer (dosimeter) [AD-A260852] p 265 N93-25787
- Daily exercise routines p 360 N93-31455
- MONKEYS**
- Freeze-dried human red blood cells [AD-A253295] p 14 N93-11193
- Extrathalamic modulation of cortical function [AD-A255440] p 53 N93-14782
- Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962
- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz [AD-A258136] p 120 N93-17985
- Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259
- MONTE CARLO METHOD**
- A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935
- MOODS**
- Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 N93-32269
- MOON**
- The Moon: Biogenic elements p 113 N93-18548
- MORALE**
- Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660
- MORPHOLOGY**
- The earliest fossil evidence for sexual dimorphism in primates p 152 A93-27775

## MOTION PERCEPTION

- Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248
- Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystriocomorphous rodent (Mammalia: Rodentia) p 328 A93-44903
- Hair cell tufts and afferent innervation of the bullfrog crista ampullaris p 329 A93-44931
- Analysis of retinal function following laser irradiation [AD-A255649] p 52 N93-14163
- Ground testing of bioconvective variables such as morphological characterizations and mechanisms which regulate macroscopic patterns p 82 N93-17303
- MORTALITY**
- Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783
- Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306
- Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300
- MOTION**
- The neurochemical and neuropharmacological basis of motion sickness [NASA-CR-190957] p 50 N93-13061
- MOTION PERCEPTION**
- Anisotropy in an ambiguous kinetic depth effect p 55 A93-14097
- Human speed perception is contrast dependent p 55 A93-14119
- Human vestibular function and weightlessness p 84 A93-17531
- Factors influencing perceived angular velocity p 97 A93-17800
- Influence of animation on dynamical judgments p 98 A93-20275
- The perception of heading during eye movements p 99 A93-20692
- Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653
- OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571
- Human speed perception is contrast dependent p 174 A93-26950
- Spatial orientation and dynamics in virtual reality systems - Lessons from flight simulation p 178 A93-27185
- Influence of animation on dynamical judgments p 180 A93-28692
- Gravitoinertial force level affects the appreciation of limb position during muscle vibration p 169 A93-28744
- Antagonistic otolith-visual units in cat vestibular nuclei p 199 A93-30511
- Effects of visually induced self-motion perception (vection) on upright standing posture p 214 A93-31531
- Temporal Frequency Spectrum for describing and modeling motion perception p 232 A93-33250
- Effects of long-term weightlessness on roll circularvection p 279 A93-39725
- Perceptual bias for forward-facing motion p 339 A93-44940
- Perceptual scaling of whole-body low frequency linear oscillatory motion p 379 A93-49225
- Virtually induced motion sickness in virtual environments p 381 A93-49401
- Cybersickness - Perception of self-motion in virtual environments p 381 A93-49402
- Spatial orientation, adaptation, and motion sickness in real and virtual environments p 382 A93-49403
- Mental rotation - A key to mitigation of motion sickness in the virtual environments? p 387 A93-49404
- A literature survey for virtual environments - Military flight simulator visual systems and simulator sickness p 387 A93-49406
- Multi-stage integration model for human egomotion perception [AIAA PAPER 93-3564] p 406 A93-52664
- False cue detection thresholds in flight simulation [AIAA PAPER 93-3578] p 407 A93-52674
- Role of the vestibular end organs in experimental motion sickness - A primate model p 399 A93-55933
- The accelerative stimulus for motion sickness p 410 A93-55938
- Simulator sickness p 403 A93-55944
- Motion and human performance p 406 A93-55949
- Visual psychophysics of egomotion [AD-A248349] p 26 N93-11488
- Visual perception of structure from motion [AD-A253235] p 26 N93-11503
- The detection of lateral motion by US Navy jet pilots [AD-A258115] p 120 N93-17896
- Role of orientation reference selection in motion sickness [NASA-CR-191912] p 124 N93-18596
- Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104

## MOTION SICKNESS

- Retinal modeling: Segmenting motion from spatio-temporal inputs using neural networks [AD-A258854] p 125 N93-19369
- Visual processing of object velocity and acceleration [AD-A261048] p 265 N93-25778
- Neural basis of motion perception [AD-A261452] p 260 N93-26349
- The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 N93-31237

## MOTION SICKNESS

- Assessing for preflight predictors of airsickness p 8 A93-10335
- Electronystagmography and audio potentials in space flight p 9 A93-11675
- Beta-endorphin and arginine vasopressin following stressful sensory stimuli in man p 47 A93-16158
- The Canadian forces airsickness rehabilitation program, 1981-1991 p 89 A93-18042
- Physical fitness as a criterion of readiness for spaceflights p 98 A93-18412
- EEG changes in man during motion sickness induced by parallel swing p 92 A93-19996
- A four-pole electric swing and its application to the research on vestibular function p 103 A93-19999
- Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility p 116 A93-24037
- Spectral analysis of the electroencephalographic response to motion sickness p 116 A93-24041
- Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435
- Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness p 239 A93-35211
- Central neurophysiological and neurochemical vomiting mechanisms (Review of the literature) p 240 A93-35232
- 8-OH-DPAT does not interfere with habituation to motion-induced emesis in cats p 271 A93-38451
- Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711
- Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712
- Xylazine emesis, yohimbine and motion sickness susceptibility in the cat p 324 A93-42450
- Habituation to feline motion sickness p 328 A93-44900
- Understanding microwaves [ISBN 0-471-57567-4] p 357 A93-46300
- Changes in the dark focus of accommodation associated with simulator sickness p 379 A93-49222
- Perceptual scaling of whole-body low frequency linear oscillatory motion p 379 A93-49225
- Profile analysis of simulator sickness symptoms - Application to virtual environment systems p 381 A93-49399
- Motion sickness and oculomotor systems in virtual environments p 381 A93-49400
- Virtually induced motion sickness in virtual environments p 381 A93-49401
- Cybersickness - Perception of self-motion in virtual environments p 381 A93-49402
- Spatial orientation, adaptation, and motion sickness in real and virtual environments p 382 A93-49403
- Mental rotation - A key to mitigation of motion sickness in the virtual environments? p 387 A93-49404
- Will simulation sickness slow down the diffusion of virtual environment technology? p 391 A93-49405
- A literature survey for virtual environments - Military flight simulator visual systems and simulator sickness p 387 A93-49406
- Salivary total protein and experimental Coriolis sickness p 383 A93-49573
- Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 386 A93-52405
- Phenytol as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162
- Review of the space medico-engineering research in China [AAS PAPER 91-623] p 402 A93-55802
- Motion and space sickness [ISBN 0-8493-4703-3] p 402 A93-55929
- Motion sickness and evolution p 399 A93-55930
- The central nervous connections involved in motion induced emesis p 399 A93-55931
- Neurophysiology of motion sickness p 399 A93-55932
- Role of the vestibular end organs in experimental motion sickness - A primate model p 399 A93-55933
- Neurochemistry and pharmacology of motion sickness in nonhuman species p 399 A93-55934
- Endocrinology of space/motion sickness p 403 A93-55935
- Animal models in motion sickness research p 399 A93-55936

- Investigating motion sickness using the conditioned taste aversion paradigm p 400 A93-55937
- The accelerative stimulus for motion sickness p 410 A93-55938
- Physiology of motion sickness symptoms p 403 A93-55939
- Prediction of motion sickness susceptibility p 403 A93-55940
- Space motion sickness monitoring experiment - Spacelab 1 p 403 A93-55941
- Adaptation to the simulated stimulus rearrangement of weightlessness p 403 A93-55942
- Statistical prediction of space motion sickness p 403 A93-55943
- Simulator sickness p 403 A93-55944
- Autogenic-feedback training - A treatment for motion and space sickness p 404 A93-55946
- Adaptation to nauseogenic motion stimuli and its application in the treatment of airsickness p 404 A93-55947
- Motion sickness susceptibility and behavior p 405 A93-55948
- Motion and human performance p 406 A93-55949
- The neurochemical and neuropharmacological basis of motion sickness [NASA-CR-190957] p 50 N93-13061
- Adaptation to transient postural perturbations [NASA-CR-190959] p 105 N93-16699
- Role of orientation reference selection in motion sickness [NASA-CR-191912] p 124 N93-18596
- A toposcopic investigation of brain electrical activity induced by motion sickness [AD-A259024] p 124 N93-18952
- A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 N93-24490
- Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 N93-24738
- Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 N93-32364
- MOTION SICKNESS DRUGS**
- Effects of antimotion sickness drug mixture B on ultrastructures of cerebral and cerebellar cortexes in suspended rabbits p 10 A93-13704
- First intramuscular administration in the U.S. space program --- of motion sickness drugs p 84 A93-17534
- New pharmacologic approaches to the prevention of space/motion sickness p 85 A93-17538
- Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy p 211 A93-30278
- Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 A93-30283
- Idaverine, an M2- vs. M3-selective muscarinic antagonist, does not prevent motion sickness in cats p 327 A93-44878
- Applied chemical engineering thermodynamics [ISBN 0-387-54759-2] p 357 A93-46075
- Understanding microwaves [ISBN 0-471-57567-4] p 357 A93-46300
- Comparison of treatment strategies for space motion sickness p 386 A93-52402
- Phenytoin as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162
- Motion and space sickness [ISBN 0-8493-4703-3] p 402 A93-55929
- Pharmacological countermeasures against motion sickness p 404 A93-55945
- MOTION SIMULATION**
- Temporal Frequency Spectrum for describing and modeling motion perception p 232 A93-33250
- Visualization techniques for analyzing control of human movement: Affine mappings between multi-dimensional spaces p 353 N93-30204
- MOTION SIMULATORS**
- A four-pole electric swing and its application to the research on vestibular function p 103 A93-19999
- MOTIVATION**
- Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660
- MOTOR VEHICLES**
- A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment [DE93-007428] p 264 N93-25318
- MOUNTAINS**
- Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge [AD-A264260] p 337 N93-30894
- MULTIENGINE VEHICLES**
- Mandatory multi-engined training syllabus [CAP-601] p 363 N93-31729

## SUBJECT INDEX

### MULTIMEDIA

- A physician's workstation designed for NASA and earth-based applications p 189 A93-28695

### MULTIPROCESSING (COMPUTERS)

- A modular head/eye platform for real-time reactive vision [OUEL-1941/92] p 320 N93-28897

### MULTISENSOR APPLICATIONS

- Fusing human and machine skills for remote robotic operations p 137 A93-24994
- Proposed evaluation framework for assessing operator performance with multisensor displays p 232 A93-33444

### MULTIVARIATE STATISTICAL ANALYSIS

- A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727
- G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775

### MURCHISON METEORITE

- The fate or organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite p 110 A93-17984
- Comment on 'Summary and implications of reported amino acid concentrations in the Murchison meteorite' by E. L. Shock and M. D. Schulte p 412 A93-53294

### MUSCLES

- Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats p 77 A93-19994
- Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039
- Flight helmet weight, +Gz forces, and neck muscle strain p 136 A93-24046
- Skeletal muscle responses to unloading with special reference to man p 166 A93-28718
- Ultrastructural and biochemical studies on muscle atrophy induced by suspension and suspension with denervation in lower limbs of rats p 200 A93-31530
- Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro p 205 A93-33045
- Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- Mapping of electrical muscle stimulation using MRI p 279 A93-40549
- Myosin and troponin changes in rat soleus muscle after hindlimb suspension p 273 A93-41124
- Intermittent cold exposure causes a muscle-specific shift in the fiber type composition in rats p 378 A93-52618
- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets [AD-A252427] p 13 N93-10709
- Establishing laboratory standards for biological flight experiments [NASA-CR-184402] p 40 N93-12901
- Training, muscle fatigue and stress fractures [AD-A255277] p 54 N93-15006
- Exercise during long term exposure to space: Value of exercise during space exploration p 82 N93-16807
- Control system and method for prosthetic devices [NASA-CASE-MS-21941-1] p 106 N93-17087
- Design of a resistive exercise device for use on the Space Shuttle [NASA-CR-192079] p 108 N93-17805
- Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALs) [AD-A258364] p 121 N93-18209
- Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 N93-24763
- Initial experiments with a myoelectric-based muscle sensor [DE92-016034] p 237 N93-25099
- Helmeted head and neck dynamics under whole-body vibration p 264 N93-25531
- Mechanical stimulation of skeletal muscle increases prostaglandin F2(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism [NASA-CR-193041] p 282 N93-27102
- Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 N93-27989
- MUSCULAR FATIGUE**
- Adaptation of skeletal muscles and physical work capacity in a weightless environment p 38 A93-15527
- An analysis of the respiratory muscle fatigue under resistive loading when breathing gas mixtures containing different amounts of oxygen p 76 A93-18299
- Effects of fatigue and heat stress on vigilance of workers in protective clothing p 177 A93-27173

Development and implementation of the MotoMir experiment on the Mir Space Station

p 220 N93-24363

Sudden loading and fatigue effects on the human spine  
[PB93-167526]

p 286 N93-29199

# MUSCULAR FUNCTION

Magnetic resonance imaging and electromyography as indexes of muscle function

p 44 A93-14975

Electromyographic activity while performing the anti-G straining maneuver during high sustained acceleration

p 47 A93-16155

Control of breathing under conditions of altered atmospheric density during muscular work

p 89 A93-18288

Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally

p 111 A93-21684

Gravitoinertial force level affects the appreciation of limb position during muscle vibration

p 169 A93-28744

Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse

p 157 A93-28752

Distinguishing unloading- versus reloading-induced changes in rat soleus muscle

p 157 A93-28763

Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining

p 242 A93-35498

Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery

p 326 A93-44176

Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing

p 326 A93-44178

Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs

p 326 A93-44183

Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism

p 360 A93-46968

Functional adaptation of different rat skeletal muscles to weightlessness

p 377 A93-49575

Intermittent cold exposure causes a muscle-specific shift in the fiber type composition in rats

p 378 A93-52618

Effect of water immersion on muscle sympathetic nerve response during static muscle contraction

p 402 A93-55328

Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats

p 398 A93-55329

Initial experiments with a myoelectric-based muscle sensor

p 237 N93-25099

Growth factor involvement in tension-induced skeletal muscle growth

p 282 N93-27113

Visualization techniques for analyzing control of human movement: Affine mappings between multi-dimensional spaces

p 353 N93-30204

Protein requirements in hypoxia or hypokinesia

p 368 N93-32244

# MUSCULAR STRENGTH

Contractile properties of the calf triceps muscle in humans exposed to simulated weightlessness

p 45 A93-15168

Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy

p 78 A93-20033

Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity

p 78 A93-20036

An improved simulation based biomechanical model to estimate static muscle loadings

p 160 A93-27172

Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model

p 212 A93-30280

A review of muscle atrophy in microgravity and during prolonged bed rest

p 213 A93-30771

Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats

p 271 A93-39703

# MUSCULAR TONUS

Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training

p 37 A93-14970

Contractile properties of the calf triceps muscle in humans exposed to simulated weightlessness

p 45 A93-15168

Gravitoinertial force level affects the appreciation of limb position during muscle vibration

p 169 A93-28744

Effect of adaptation to hypoxia on the contractile activity of fast and slow muscles in the rat

p 324 A93-43035

# MUSCULOSKELETAL SYSTEM

Adaptation of skeletal muscles and physical work capacity in a weightless environment

p 38 A93-15527

Effect of prolonged antihypertensive bed rest hypokinesia on functional properties of the neuromuscular system in humans

p 116 A93-23151

An improved simulation based biomechanical model to estimate static muscle loadings

p 160 A93-27172

Skeletal muscle responses to unloading with special reference to man

p 166 A93-28718

Predicting skeletal adaptation in altered gravity environments

p 213 A93-30772

Mechanically induced alterations in cultured skeletal muscle growth

p 202 A93-32749

Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight

p 272 A93-40548

Effect of adaptation to hypoxia on the contractile activity of fast and slow muscles in the rat

p 324 A93-43035

Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats

p 326 A93-44179

Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs

p 326 A93-44183

Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression

p 327 A93-44184

Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity

p 377 A93-49294

Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions

p 383 A93-49568

Effect of water immersion on muscle sympathetic nerve response during static muscle contraction

p 402 A93-55328

Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats

p 398 A93-55329

Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle

p 399 A93-55458

Bone loss and human adaptation to lunar gravity

p 51 N93-14002

Design of a resistive exercise device for use on the Space Shuttle

p 108 N93-17805

[NASA-CR-192079]

Musculoskeletal discipline science plan

p 128 N93-19892

[NASA-TM-108039]

Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis

p 222 N93-24763

[NASA-CR-193040]

Mechanical stimulation of skeletal muscle increases prostaglandin F<sub>2</sub>(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism

p 282 N93-27102

[NASA-CR-193041]

Growth factor involvement in tension-induced skeletal muscle growth

p 282 N93-27113

[NASA-CR-193023]

The physiological limitations of man in the high G environment

p 319 N93-28861

# MUSIC

Demodulation processes in auditory perception

p 54 N93-15053

[AD-A255748]

# MUTATIONS

Selection of a ribozyme that functions as a superior template in a self-copying reaction

p 111 A93-22053

Katz model prediction of Caenorhabditis elegans mutagenesis on STS-42

p 50 N93-13023

[NASA-TM-4383]

Comparative mutagenesis of human cells in vivo and in vitro

p 276 N93-28651

[DE93-012269]

Control and circadian behavior by transplanted suprachiasmatic nuclei

p 335 N93-30382

[AD-A264553]

# MYOCARDIAL INFARCTION

The adrenalin/noradrenalin and the alpha/beta adrenoreceptor correlations in the myocardium and the adrenergic chronotropic and inotropic reactions under extreme conditions and during adaptation

p 1 A93-10125

Myocardial infarction occurring at the conclusion of centrifuge training in a 37-year-old aviator:

p 89 A93-18044

# MYOCARDIUM

Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment

p 247 A93-35208

Accumulation of calcium ions in the myocardial sarcoplasmic reticulum of restrained rats exposed to a pulsed electromagnetic field

p 240 A93-35225

Metabolic factors influencing myocardial recovery from acidosis (CiC3)

p 14 N93-10796

[AD-A253761]

# MYOELECTRICITY

Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment

p 247 A93-35208

Mapping of electrical muscle stimulation using MRI

p 279 A93-40549

Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery

p 326 A93-44176

Control system and method for prosthetic devices

p 106 N93-17087

[NASA-CASE-MSC-21941-1]

# MYOGLOBIN

Myosin and troponin changes in rat soleus muscle after hindlimb suspension

p 273 A93-41124

Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs

p 326 A93-44183

# N

# NAP-OF-THE-EARTH NAVIGATION

Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays

p 311 N93-27177

# NAPHTHALENE

The origin of the polycyclic aromatic hydrocarbons in meteorites

p 110 A93-17983

# NARCOSIS

Subjective and behavioral effects associated with repeated exposure to narcosis

p 7 A93-10327

Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis

p 7 A93-10329

# NARCOTICS

The role of central monoaminergic systems in arousal and selective attention

p 122 N93-18264

[AD-A258500]

# NASA PROGRAMS

Teleoperation to robotics at Langley Research Center

p 101 A93-18569

Overview of NASA's 1991 Life Support Systems Analysis Workshop

p 290 A93-41310

[SAE PAPER 921118]

Preliminary design of a radiator shading device for a lunar outpost

p 139 N93-18019

[NASA-CR-192016]

Space radiation health program plan

p 123 N93-18375

[NASA-TM-108036]

Life sciences recruitment objectives

p 205 N93-22623

# NASA SPACE PROGRAMS

Space telerobotic research and applications at Space Systems/Loral

p 62 A93-15588

[AAS PAPER 91-046]

NASA plans and opportunities --- space flight activities throughout the 1990s

p 79 A93-20652

Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers

p 168 A93-28739

Flight Telerobotic Servicer legacy

p 190 A93-29106

NASA's telerobotics research program

p 263 A93-35566

Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems

p 290 A93-41312

[SAE PAPER 921120]

NASA's manned space flight program

p 402 A93-55805

[AAS PAPER 91-626]

NASA Space Human Factors Program

p 31 N93-10890

[NASA-TM-108005]

Exobiology: The NASA program

p 114 N93-18561

# NATURAL GAS

Biological conversion of synthesis gas culture development

p 6 N93-12482

[DE92-001279]

# NAUSEA

Salivary total protein and experimental Coriolis sickness

p 383 A93-49573

# NAVIGATION

A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks

p 367 N93-32151

NAVIGATION AIDS

Vision navigator for free-flying robots

p 183 A93-27025

Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights

p 341 N93-30426

[AD-A264626]

# NAVY

Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALS)

p 121 N93-18209

[AD-A258364]

The US Navy Healthy Back Program: Effect on back knowledge among recruits

p 121 N93-18210

[AD-A258368]

The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm

p 132 N93-18294

[AD-A258156]

Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm

p 171 N93-20580



## NECK (ANATOMY)

- Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074  
Flight helmet weight,  $\dot{I}$  Gz forces, and neck muscle strain p 136 A93-24046  
Determinants of  $\dot{I}$  Gz-related neck pain - A preliminary survey p 380 A93-49227  
Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high  $\dot{I}$  Gz forces p 384 A93-52298  
Hybrid 2 and hybrid 3 dummy neck properties for computer modeling [AD-A255544] p 66 N93-13874  
A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672

## NEGATIVE IONS

- Regenerable Microbial Check Valve - Life cycle tests results [SAE PAPER 921316] p 303 A93-41478  
Inactivation of a model coliphage virus in water by iodine [SAE PAPER 921361] p 274 A93-41520

## NEOPLASMS

- Cancer risk assessment with intermittent exposure p 171 A93-28766  
Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785  
Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro [DE92-013510] p 13 N93-10626

## NERVES

- Ultrastructural and biochemical studies on muscle atrophy induced by suspension and suspension with denervation in lower limbs of rats p 200 A93-31530  
JPRS report: Science and technology, Central Eurasia: Life sciences [JPRS-ULS-92-025] p 244 A93-25405  
Primary events in olfactory reception [AD-A260562] p 255 A93-25944  
Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A264829] p 336 A93-30613  
An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 N93-30818  
Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 A93-30882

## NERVOUS SYSTEM

- Beta-endorphin and arginine vasopressin following stressful sensory stimuli in man p 47 A93-16158  
Effect of prolonged antihypertensive bed rest hypokinesia on functional properties of the neuromuscular system in humans p 116 A93-23151  
Neurology of microgravity and space travel p 168 A93-28735  
Identification of a critical period for motor development in neonatal rats p 157 A93-28764  
Persistent blockade of potassium-evoked serotonin release from rat frontocortical terminals after fluoxetine administration p 202 A93-32125  
Investigation of individual and typological features of an operator's nervous system under different work regimes p 339 A93-43024  
Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146  
New techniques for positron emission tomography in the study of human neurological disorders [DE92-015353] p 23 N93-11873  
Neurochemical control of circadian rhythms [AD-A255054] p 50 N93-13116  
Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A256340] p 55 N93-15198  
The role of central monoaminergic systems in arousal and selective attention [AD-A258500] p 122 N93-18264  
Neuroscience discipline science plan [NASA-TM-108041] p 128 N93-19882  
Computer based analysis and synthesis of retinal function [AD-A260514] p 221 N93-24420  
Biomagnetic localization from transient quasi-static events [DE93-007328] p 253 N93-25186  
Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 N93-30594  
Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A264829] p 336 N93-30613

## NETWORK ANALYSIS

- Performance measurement systems: A best practices study [AD-A262180] p 350 N93-29444  
Analysis of visual loss from retinal lesions [AD-A264692] p 336 N93-30494

## NEURAL NETS

- In search of the human touch --- in design of robotic hands p 102 A93-19256  
Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700  
A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267  
An introduction to the information processing components of the brain [RSRE-MEMO-4350] p 25 N93-10979  
Silicon neuron [AD-A255091] p 50 N93-12756  
Simulation of excitatory/inhibitory interactions in single auditory neurons p 50 N93-13252  
Neural network retinal model real time implementation [AD-A255652] p 52 N93-14210  
Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962  
Constraints on learning in dynamic synapses [PREPRINT-890] p 100 N93-17026  
Effective neurons and attractor neural networks in cortical environment [PREPRINT-829] p 82 N93-17214  
The cognitive, perceptual, and neural bases of skilled performance [AD-A258236] p 130 N93-17820  
Electrically modifiable nonvolatile SONOS synapses for electronic neural networks [AD-A258318] p 122 N93-18252  
Recognition of partially occluded threat objects using the annealed Hopfield network p 142 N93-19466  
Analysis and synthesis of adaptive neural elements and assemblies [AD-A259954] p 219 N93-24247  
Physiological indices of mental workload [AD-A261692] p 260 N93-26391  
Fuzzy neural network methodology applied to medical diagnosis p 334 N93-29546  
An accelerated training method for back propagation networks [NASA-CASE-MSC-21625-1] p 340 N93-29610  
Computing with neural maps: Application to perceptual and cognitive function [AD-A264056] p 341 N93-30033  
Analysis of visual loss from retinal lesions [AD-A264692] p 336 N93-30494  
An algorithm for simple and complex feature detection: From retina to primary visual cortex [AD-A264306] p 337 N93-30897  
Man-machine cooperation in advanced teleoperation p 366 N93-32106

## NEUROBLASTS

- Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster* p 1 A93-11691

## NEUROLOGY

- Intraslow bioelectric activity of the monkey's brain in the development of the high-pressure neural syndrome p 75 A93-18286  
Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots p 91 A93-18416  
Neurology of microgravity and space travel p 168 A93-28735  
Neurobehavioral test in civil aviation flight personnel p 223 A93-30443  
On a possible role of carbon dioxide in the genesis of the hyperbaric neural syndrome p 200 A93-31190  
Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711  
Case report - Chronic sub-dural hematoma following high-speed ejection p 282 A93-41171  
Risk assessment and clinical aeromedical decision-making p 385 A93-52305  
An introduction to the information processing components of the brain [RSRE-MEMO-4350] p 25 N93-10979  
Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146  
Publications of the Space Physiology and Countermeasures Program, Neuroscience Discipline: 1980-1990 p 55 N93-15583  
Measurement of behavioral thermoregulation [PB92-217033] p 172 N93-21046

- Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates [DE93-007677] p 207 N93-22913  
Sensory sensitivities and discriminations and their roles in aviation [AD-A259742] p 224 N93-23479  
Theory of synaptic plasticity in visual cortex [AD-A260052] p 224 N93-23960  
Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m [DLR-FB-92-14] p 219 N93-24093  
Proceedings of Workshop 1: The Human Brainmap Database [AD-A260720] p 258 N93-25654  
The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068  
Neuropsychological components of object identification [AD-A261449] p 259 N93-26347  
Secondary injury factors and preventative treatment [PB93-176014] p 283 N93-27409

## NEUROMUSCULAR TRANSMISSION

- Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407

## NEURONS

- To the stars with the cytoskeleton? p 1 A93-11198  
The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860  
The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863  
Normalization of cell responses in cat striate cortex p 154 A93-28700  
A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727  
Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens p 201 A93-32118  
Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness p 239 A93-35211  
Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670  
Roentgenophosphors as an indicator of the radiation excitability of the central nervous system p 325 A93-43078  
Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561  
An introduction to the information processing components of the brain [RSRE-MEMO-4350] p 25 N93-10979  
Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146  
Silicon neuron [AD-A255091] p 50 N93-12756  
Neurochemical control of circadian rhythms [AD-A255054] p 50 N93-13116  
Simulation of excitatory/inhibitory interactions in single auditory neurons [AD-A253614] p 50 N93-13252  
Extrathalamic modulation of cortical function [AD-A255440] p 53 N93-14782  
Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962  
Constraints on learning in dynamic synapses [PREPRINT-890] p 100 N93-17026  
Effective neurons and attractor neural networks in cortical environment [PREPRINT-829] p 82 N93-17214  
The role of central monoaminergic systems in arousal and selective attention [AD-A258500] p 122 N93-18264  
Automated system for analyzing the activity of individual neurons p 173 N93-22163  
Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238  
Analysis and synthesis of adaptive neural elements and assemblies [AD-A259954] p 219 N93-24247  
Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 N93-30594  
Organization of the human circadian system [AD-A264675] p 361 N93-32015

## NEUROPHYSIOLOGY

- The role of dermorphin in the regulation of the winter hibernation processes in mammals p 38 A93-16748

- Vagotropic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749
- Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis p 39 A93-16750
- Sleep as a restorative process under extreme conditions p 89 A93-18291
- Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293
- A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302
- In search of the human touch --- in design of robotic hands p 102 A93-19256
- Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030
- Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700
- Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042
- Tryptophan availability modulates serotonin release from rat hypothalamic slices p 152 A93-27000
- Effect of chronic D-fenfluramine administration on rat hypothalamic serotonin levels and release p 152 A93-27049
- Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697
- Normalization of cell responses in cat striate cortex p 154 A93-28700
- Serotonin release varies with brain tryptophan levels p 201 A93-32119
- Persistent blockade of potassium-evoked serotonin release from rat frontocortical terminals after fluoxetine administration p 202 A93-32125
- Effects of dietary amino acids, carbohydrates, and choline on neurotransmitter synthesis p 204 A93-33031
- Tyrosine - Effects on catecholamine release p 204 A93-33038
- Central neurophysiological and neurochemical vomiting mechanisms (Review of the literature) p 240 A93-35232
- The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241
- Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713
- Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715
- Cognitive performance and event-related brain potentials under simulated high altitudes p 331 A93-42189
- Habituation to feline motion sickness p 328 A93-44900
- Vestibular afferent responses to microrotational stimuli p 328 A93-44930
- The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966
- Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561
- Role of the central nervous system in the control of hibernation p 378 A93-51025
- Motion and space sickness p 402 A93-55929
- [ISBN 0-8493-4703-3] p 399 A93-55930
- Motion sickness and evolution p 399 A93-55932
- Neurophysiology of motion sickness p 399 A93-55934
- Neurochemistry and pharmacology of motion sickness in nonhuman species p 403 A93-55939
- Physiology of motion sickness symptoms p 404 A93-55947
- Adaptation to nauseogenic motion stimuli and its application in the treatment of airsickness p 404 A93-55947
- Computer simulations of object discrimination by visual cortex p 12 A93-10271
- [AD-A253345] p 13 A93-10650
- Auditory processing of complex sounds across frequency channels p 13 A93-10650
- [AD-A253612] p 14 A93-11146
- An introduction to the information processing components of the brain p 25 A93-10979
- [RSRE-MEMO-4350] p 14 A93-11146
- Physiological analyses of the afferents controlling brain neurochemical systems p 14 A93-11146
- [AD-A253185] p 18 A93-11299
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 A93-11299
- The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB p 27 A93-12432
- [AD-A254840] p 49 A93-12566
- Functional MRI studies of human vision on a clinical imager p 49 A93-12566
- [DE92-017448] p 50 A93-12945
- A core facility for the study of neurotoxins of biological origin p 50 A93-12945
- [AD-A254359] p 50 A93-13061
- The neurochemical and neuropharmacological basis of motion sickness p 50 A93-13061
- [NASA-CR-190957] p 41 A93-13503
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 p 41 A93-13503
- [DE92-040153] p 58 A93-14646
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 p 41 A93-13520
- [DE92-040152] p 58 A93-14646
- Neuromagnetic investigations of cortical regions underlying short-term memory p 58 A93-14646
- [AD-A255788] p 53 A93-14782
- Extrathalamic modulation of cortical function p 53 A93-14782
- [AD-A255440] p 59 A93-14788
- Cognition and the brain p 59 A93-14788
- [AD-A255483] p 54 A93-14789
- Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness p 54 A93-14789
- [AD-A255485] p 55 A93-15583
- Publications of the Space Physiology and Countermeasures Program, Neuroscience Discipline: 1980-1990 p 55 A93-15583
- [NASA-CR-4476] p 96 A93-16962
- Conversion of temporal correlations between stimuli to spatial correlations between attractors p 96 A93-16962
- [PREPRINT-856] p 82 A93-17359
- Mathematics and biology: The interface, challenges and opportunities p 82 A93-17359
- [DE92-041207] p 122 A93-18264
- The role of central monoaminergic systems in arousal and selective attention p 122 A93-18264
- [AD-A258500] p 128 A93-19882
- Neuroscience discipline science plan p 128 A93-19882
- [NASA-TM-108041] p 173 A93-22163
- Automated system for analyzing the activity of individual neurons p 173 A93-22163
- [NASA-CR-192703] p 207 A93-22800
- Micromotional studies of utricular and canal afferents p 207 A93-22800
- [NASA-CR-192703] p 219 A93-24247
- Analysis and synthesis of adaptive neural elements and assemblies p 219 A93-24247
- [AD-A259954] p 221 A93-24420
- Computer based analysis and synthesis of retinal function p 221 A93-24420
- [AD-A260514] p 259 A93-26347
- Neuropsychological components of object identification p 259 A93-26347
- [AD-A261449] p 260 A93-26349
- Neural basis of motion perception p 260 A93-26349
- [AD-A261452] p 260 A93-26436
- Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate p 260 A93-26436
- [AD-A261593] p 261 A93-26521
- Neuromagnetic investigation of cortical regions underlying short-term memory p 261 A93-26521
- [AD-A261445] p 283 A93-27654
- Analysis of neural systems involved in modulation of memory storage p 283 A93-27654
- [AD-A262418] p 335 A93-30160
- The AFOSR Workshop on the Future of EEG and MEG p 335 A93-30160
- [AD-A264338] p 335 A93-30382
- Control and circadian behavior by transplanted suprachiasmatic nuclei p 335 A93-30382
- [AD-A264553] p 330 A93-30594
- Multiple neuron recording in the hippocampus of freely moving animals p 330 A93-30594
- [AD-A264807] p 361 A93-32015
- Organization of the human circadian system p 361 A93-32015
- [AD-A264675] p 361 A93-32018
- Neurophysiological analysis of circadian rhythm entrainment p 361 A93-32018
- [AD-A264681] p 361 A93-32018
- NEUROPSYCHIATRY**
- Cortical localization of cognitive function by regression of performance on event-related potentials p 9 A93-10337
- Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus p 130 A93-25209
- NEUROTIC DEPRESSION**
- An assessment of Turkish Air Force pilots' anxiety and depression levels p 23 A93-10334
- NEUROTRANSMITTERS**
- Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure p 76 A93-18296
- Effect of chronic D-fenfluramine administration on rat hypothalamic serotonin levels and release p 152 A93-27049
- Dopamine release in rat striatum - Physiological coupling to tyrosine supply p 152 A93-27050
- Serotonin release varies with brain tryptophan levels p 201 A93-32119
- Effects of dietary amino acids, carbohydrates, and choline on neurotransmitter synthesis p 204 A93-33031
- Understanding microwaves p 357 A93-46300
- [ISBN 0-471-57567-4] p 50 A93-13116
- Neurochemical control of circadian rhythms p 50 A93-13116
- [AD-A255054] p 217 A93-23459
- Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms p 217 A93-23459
- [AD-A259803] p 335 A93-30421
- Molecular approach to hypothalamic rhythms p 335 A93-30421
- [AD-A264438] p 335 A93-30421
- NEUTRAL BUOYANCY SIMULATION**
- Neutral buoyancy simulation of space telerobotics operations p 185 A93-27038
- NIGHT VISION**
- The effect of roll-stabilized sensor information on pilot performance p 175 A93-27130
- Methods for test and evaluation of night vision goggle integrated helmets p 188 A93-27182
- Human factors issues in the use of night vision devices p 189 A93-27193
- USAF/USN fixed wing night vision - The mission p 227 A93-30055
- Helmet mounted display with multiple image sources p 227 A93-30057
- Helmet-mounted display for the night attack mission p 228 A93-30059
- Low-cost monochrome CRT helmet display p 228 A93-30061
- Visual illusions and other effects with night vision devices p 230 A93-30072
- Spatial contrast sensitivity through aviator's night vision imaging system p 393 A93-52300
- Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles p 35 A93-12508
- [AD-A254983] p 63 A93-12732
- Integration of exterior lighting systems and night vision imaging systems p 63 A93-12732
- [AD-A254826] p 70 A93-14554
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment) p 70 A93-14554
- [AD-A255525] p 104 A93-15710
- Night vision manual for the flight surgeon p 104 A93-15710
- [AD-A257059] p 107 A93-17697
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue p 107 A93-17697
- [AD-A257704] p 145 A93-19767
- A new concept for helmet mounted vision p 145 A93-19767
- Helicopter night vision goggle testing in the United Kingdom p 148 A93-19917
- Night vision goggle training: Development and production of six video programs p 148 A93-20050
- [AD-A258529] p 235 A93-23992
- In-flight field-of-view with ANVIS p 235 A93-23992
- [AD-A259905] p 226 A93-24431
- Human visual limitations on suprathreshold contrast perception through ANVIS p 226 A93-24431
- [AD-A259970] p 268 A93-26265
- Interpupillary and vertex distance effects on field-of-view and acuity with ANVIS p 268 A93-26265
- [AD-A261259] p 317 A93-28757
- Evaluation of test methods and requirements for respiratory protection systems 21 p 317 A93-28757
- [AD-A262466] p 318 A93-28859
- Head-steered sensor flight test results and implications p 318 A93-28859
- System automation and pilot-vehicle-interface for unconstrained low-altitude night attack p 320 A93-28867
- CATS EYES adjustment procedures p 353 A93-29924
- [AD-A264069] p 354 A93-30590
- The effects of superimposing symbology on a simulated night vision goggle display p 354 A93-30590
- [AD-A263458] p 354 A93-30590
- NITROGEN**
- The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys p 75 A93-18289

## NITROGEN METABOLISM

- Nitrogen control of chloroplast development and differentiation  
[DE92-017392] p 39 N93-12768
- Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle  
[NASA-CR-4497] p 269 N93-26157

### NITROGEN METABOLISM

- Effect of spaceflight on human protein metabolism  
p 360 A93-47097

### NITROGEN OXIDES

- Evaluation of NO(x)-induced toxicity  
[AD-A261034] p 283 N93-28122

### NITROUS OXIDES

- Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis  
p 7 A93-10329

### NOISE (SOUND)

- Classification of complex sounds  
[AD-A258405] p 122 N93-18223
- Measuring hearing protection device performance using the metronomics db-3100 sound level analyzer (dosimeter)  
[AD-A260852] p 265 N93-25787
- Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs  
[AD-A263011] p 350 N93-29406

### NOISE INJURIES

- Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel  
p 359 A93-45691
- The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs  
p 377 A93-49556

### NOISE SPECTRA

- Spectral motion produces an auditory after-effect  
p 405 A93-55579
- Auditory perception  
[AD-A255061] p 23 N93-12469
- Classification of complex sounds  
[AD-A258405] p 122 N93-18223

### NONEQUILIBRIUM CONDITIONS

- Chiral-symmetry-breaking in nonequilibrium chemical systems - The racemization influence  
p 269 A93-36563

### NONLINEARITY

- Operator-assisted planning and execution of proximity operations subject to operational constraints  
p 194 N93-21436

### NORADRENALINE

- The adrenalin/noradrenalin and the alpha/beta adrenoreceptor correlations in the myocardium and the adrenergic chronotropic and ionotropic reactions under extreme conditions and during adaptation  
p 1 A93-10125
- Tissue-specific noradrenergic activity during acute heat stress in rats  
p 323 A93-42193

### NOREPINEPHRINE

- Altered baseline blood volume and the norepinephrine response to stress in humans  
p 43 A93-14123
- Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups  
p 78 A93-20030
- Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat  
p 203 A93-33028

- Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1)  
p 273 A93-41167

- Physiological analyses of the afferents controlling brain neurochemical systems  
[AD-A253185] p 14 N93-11146

- Extrathalamic modulation of cortical function  
[AD-A255440] p 53 N93-14782

### NOSE (ANATOMY)

- Allergic and nonallergic rhinitis in Greek pilots  
p 21 N93-11317

### NUCLEAR MAGNETIC RESONANCE

- A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain  
p 214 A93-31267
- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin  
[AD-A262979] p 284 N93-28293

### NUCLEAR MEDICINE

- Proceedings of a Workshop on Molecular Nuclear Medicine  
[DE93-010828] p 285 N93-28835

### NUCLEAR POWER PLANTS

- Human factors engineering: A key element of instrumentation and control system design  
[DE93-006731] p 264 N93-25415

### NUCLEAR PROPULSION

- Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission  
p 60 A93-13817

### NUCLEAR RADIATION

- AFRRRI reports  
[AD-A254581] p 49 N93-12649

### NUCLEAR REACTIONS

- Target fragmentation in radiobiology  
[NASA-TM-4408] p 124 N93-18381

### NUCLEAR WARFARE

- Pyrolysis of vegetation by brief intense irradiation  
p 324 A93-42915

### NUCLEI (CYTOLOGY)

- The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia  
p 2 A93-12860

- The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration  
p 2 A93-12863

### NUCLEIC ACIDS

- Roles of water molecules in bacteria and viruses  
p 243 A93-36555

### NUCLEONS

- A computer model to determine the primary contributors to relative radiation dose received by astronauts  
p 43 A93-13935

### NUCLEOTIDES

- Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from Halobacterium saccharovorum  
p 201 A93-32116
- Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA?  
p 269 A93-36560

- Nucleotide analogs based on pentaerythritol - An hypothesis  
p 325 A93-43794

- The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs  
p 325 A93-43795

- Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection  
p 397 A93-52878

- Group II intron RNA catalysis of progressive nucleotide insertion - A model for RNA editing  
p 398 A93-55292

- Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and other minerals  
p 412 A93-55998

- Nitrogen control of chloroplast development and differentiation  
[DE92-017392] p 39 N93-12768

### NUMERICAL CONTROL

- Safety issues of manipulator systems under computer control  
p 192 A93-29121
- Computerized atmospheric trace contaminant control simulation for manned spacecraft  
[NASA-TM-108409] p 321 N93-28977

### NUTRIENTS

- Effects of their nutrient precursors on the synthesis and release of serotonin, the catecholamines, and acetylcholine - Implications for behavioral disorders  
p 204 A93-33033

- A matrix-based porous tube water and nutrient delivery system  
[SAE PAPER 921390] p 309 A93-41548

- CELSS nutrition system utilizing snails  
p 394 A93-52411

- Characterization of the water soluble component of inedible residue from candidate CELSS crops  
[NASA-TM-107557] p 139 N93-18111

- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] p 114 N93-19054

### NUTRITION

- Nutrition  
p 81 N93-16805

- Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario  
[AD-A258744] p 128 N93-20384

- Nutrition, Metabolic Disorders and Lifestyle of Aircrew  
[AGARD-CP-533] p 367 N93-32240

- An automated processing system for food frequency and nutrition knowledge questionnaire  
p 367 N93-32241

- Nutritional assessment of United States tactical air command pilots  
p 367 N93-32242

- Nutrition for a typical MAC crew during Desert Storm  
p 368 N93-32245

- Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force  
p 369 N93-32255

- The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators  
p 369 N93-32259

- Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces  
p 370 N93-32260

### NUTRITIONAL REQUIREMENTS

- Some features characterizing the supply of astronauts with vitamins C, B1, B2, and B6 during nourishment from canned-food rations on long-term space flights  
p 249 A93-35231

- CELSS nutrition system utilizing snails  
p 394 A93-52411

### Body composition and physical performance

- [AD-A255627] p 69 N93-14161
- Nutrition  
p 81 N93-16805

- A proposal to demonstrate production of salad crops in the Space Station Mockup Facility with particular attention to space, energy, and labor constraints  
[NASA-CR-192815] p 209 N93-23169

- Nutrition for a typical MAC crew during Desert Storm  
p 368 N93-32245

- Changes in food and energy intake in military aircrew  
p 368 N93-32246

- Trial of emergency ration of the Spanish Air Force  
p 368 N93-32247

- Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force  
p 369 N93-32255

- Nylon (TRADEMARK)  
Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits  
[AD-A262862] p 350 N93-29471

- NYSTAGMUS  
Effect of transdermally administered scopolamine on the vestibular system in humans  
p 383 A93-49572

## O

### OATS

- A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES)  
[NASA-CR-192219] p 114 N93-19377

### OBESITY

- Differential effects of insulin resistance on leucine and glucose kinetics in obesity  
p 152 A93-27224

### OBJECT-ORIENTED PROGRAMMING

- DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field  
[ETN-93-93799] p 284 N93-28469

### OBSTACLE AVOIDANCE

- A study of the effects of lens focal length on remote driver performance  
[AD-A263191] p 321 N93-28941

### OCCCLUSION

- Two types of occlusion cues for the perception of 3-D illusory objects in binocular fusion  
p 222 A93-30239

- Recognition of partially occluded threat objects using the annealed Hopfield network  
p 142 N93-19466

- Perception/action: An holistic approach  
[AD-A259597] p 235 N93-24067

### OCCUPATION

- Disorientation and flight safety: A survey of UK Army aircrew  
p 133 N93-19680

- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011

### OCCUPATIONAL DISEASES

- Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers  
p 168 A93-28739

- Working hours and fatigue of Japanese flight attendants (FA)  
p 171 A93-28762

- Occupational dermatitis in the aircraft industry - 35 years of progress  
p 215 A93-32776

- Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study  
p 216 A93-32786

- Occupational health problems in aviation medicine  
p 252 A93-36743

- Barotrauma in Boeing 737 cabin crew  
p 278 A93-39706

- Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel  
p 359 A93-45691

- Specific absorption rate and radiofrequency current-to-ground in human models exposed to near-field irradiation  
p 360 A93-47098

- Back ache in helicopter pilots  
p 382 A93-49566

- Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high +Gz forces  
p 384 A93-52298

- The Proceedings of the Hypobaric Decompression Sickness Workshop  
[AD-A257612] p 123 N93-18362

### OCEAN BOTTOM

- Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments  
p 80 A93-20672

### OCEAN SURFACE

- Algae and oxygen in earth's ancient atmosphere  
p 153 A93-27800

### OCEANS

- Europa: Prospects for an ocean and exobiological implications  
p 113 N93-18552

**OCULAR CIRCULATION**

Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 N93-19708

**OCULOMETERS**

Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 386 A93-52405

**OCULOMOTOR NERVES**

Predictable eye-head coordination during driving p 57 A93-16373

The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219

Motion sickness and oculomotor systems in virtual environments p 381 A93-49400

**OFFGASSING**

Protective helmet assembly [NASA-CASE-MSC-21842-1] p 106 N93-17088

**OLFACTORY PERCEPTION**

Explosives search dogs p 159 N93-21933

Primary events in olfactory reception [AD-A260562] p 255 N93-25944

**OLIGOMERS**

Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560

Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and other minerals p 412 A93-55998

**OLIVINE**

Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces --- space biological evolution p 411 A93-53286

**ON-LINE SYSTEMS**

Automated system for analyzing the activity of individual neurons p 173 N93-22163

Operator Performance Support System (OPSS) p 196 N93-22195

**ONBOARD DATA PROCESSING**

Intelligent fault management for the Space Station active thermal control system p 32 N93-11930

**ONBOARD EQUIPMENT**

Information management problems and their influence on cockpit equipment architecture of transport aircraft p 223 A93-31491

**OPERATIONAL AMPLIFIERS**

Investigation into the common mode rejection ratio of the physiological signal conditioner circuit p 245 N93-26073

**OPERATIONAL HAZARDS**

Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377

Rationale for a hyperbaric treatment capability at a Lunar Station p 213 A93-30286

**OPERATOR PERFORMANCE**

The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172

Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519

Individual differences and subgroups within populations - The shopping bag approach p 136 A93-24050

An individual differences approach to fitness-for-duty assessment p 178 A93-27178

CREWCUT - A new tool for predicting human performance in conceptual systems p 178 A93-27179

CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180

Testing a subjective metric of situation awareness p 178 A93-27183

Some biochemical and functional characteristics of body state during multihour operator activity under extreme conditions p 161 A93-27686

Predicting individual differences in complex skill acquisition - Dynamics of ability determinants p 181 A93-28731

Telerobotic system performance measurement - Motivation and methods p 191 A93-29114

Estimation of the number of operators and their efficiency in flight vehicle control p 193 A93-29696

The advent of helmet-mounted displays in the combat aircraft cockpit - An operator's viewpoint p 227 A93-30056

Proposed evaluation framework for assessing operator performance with multisensor displays p 232 A93-33444

Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446

Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252

Cognitive predictors of vigilance p 287 A93-40771

Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements p 287 A93-40772

Investigation of individual and typological features of an operator's nervous system under different work regimes p 339 A93-43024

Operator performance with alternative manual control modes in teleoperation p 390 A93-49397

Telerobot control mode performance assessment [AAS PAPER 92-053] p 392 A93-50593

Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503

From pilot's associate to satellite controller's associate p 32 N93-11922

Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity [AD-A255989] p 58 N93-14416

Gloved operator performance study [AD-A256894] p 104 N93-16048

An automated version of the dichotic listening test: Hardware, software, and procedural details [AD-A258114] p 120 N93-17895

Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool [AD-A258531] p 195 N93-21753

Operator Performance Support System (OPSS) p 196 N93-22195

Engineman stress and fatigue: Pilot tests [PB93-175008] p 351 N93-29675

The air traffic controller's mental model and its implications for equipment design and trainee selection p 341 N93-30322

**OPERATORS (PERSONNEL)**

Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252

The European astronauts training programme p 226 N93-24346

**OPHTHALMOLOGY**

Photo-Refractive Keratectomy (PRK) - Threat or millennium for military pilots? p 401 A93-55169

Operational use of contact lenses by military aircrew [AGARD-AG-334] p 95 N93-15824

**OPTICAL CORRECTION PROCEDURE**

A computational model for the stereoscopic optics of a head-mounted display p 390 A93-49393

**OPTICAL DATA PROCESSING**

Visual data interpretation; Proceedings of the Meeting, San Jose, CA, Feb. 10-11, 1992 [SPIE-1668] p 391 A93-49451

A new concept for helmet mounted vision p 145 N93-19767

**OPTICAL EQUIPMENT**

United States Army space experiment 601 [AD-A261460] p 260 N93-26353

**OPTICAL FIBERS**

A fiber optic probe for the detection of cataracts p 254 N93-25593

**OPTICAL FILTERS**

Toward the ideal military aviation sunglass [AD-A258200] p 140 N93-18200

**OPTICAL ILLUSION**

Visual scene effects on the somatogravic illusion p 88 A93-18035

Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653

Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 N93-24366

**OPTICAL MEASUREMENT**

Theory of signal detection and its application to visual target acquisition: A review of the literature [AD-A262920] p 288 N93-28307

**OPTICAL PROPERTIES**

Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing [DE93-006411] p 210 N93-24028

**OPTICAL TRACKING**

Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural p 203 A93-32773

Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks p 287 A93-41166

Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223

**OPTIMAL CONTROL**

Movement tracking performance as a function of required force level p 177 A93-27171

Dynamic multiobjective decision and its application in environmental control and life support system p 230 A93-30439

Modeling human response errors in synthetic flight simulator domain p 141 N93-19464

Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems [NASA-CR-192571] p 359 N93-32365

**OPTIMIZATION**

Vision modelling applications for display optimisation p 29 A93-13414

The optimum design of personal liquid cooling system p 60 A93-14314

Operator/system communication - An optimizing decision tool p 101 A93-19104

An approach to the functional optimization of the CELSS Test Facility [SAE PAPER 921199] p 295 A93-41375

Human habitat design for the Space Exploration Initiative p 344 A93-41978

In vitro selection of optimal DNA substrates for T4 RNA ligase p 329 A93-44939

User areas in aircraft cockpit, using methods of rapid prototype development [MBB-FE-315-S-PUB-0493] p 196 N93-22389

Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085

**OPTOMETRY**

Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 N93-24366

**ORBITAL ASSEMBLY**

Operator vision aids for telerobotic assembly and servicing in space p 262 A93-35530

EVA operational guidelines and considerations for use during the Space Station Freedom design review process p 345 A93-42119

Motion planning of a dual-arm free-floating manipulator with inertially fixed base [AIAA PAPER 93-3864] p 393 A93-51450

Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981

SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 N93-18153

**ORBITAL MANEUVERS**

Visual display aid for orbital maneuvering - Design considerations p 135 A93-23518

Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519

**ORBITAL RENDEZVOUS**

Operator-assisted planning and execution of proximity operations subject to operational constraints p 194 N93-21436

**ORBITAL SERVICING**

Intelligent robotics capabilities of the teleautonomy testbed p 184 A93-27035

EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory p 231 A93-31522

Operator vision aids for telerobotic assembly and servicing in space p 262 A93-35530

A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever [NASA-CR-193301] p 365 N93-31844

**ORBITAL SPACE TESTS**

Conceptual design of ECLSS microgravity test beds [SAE PAPER 921164] p 294 A93-41346

**ORGANELLES**

The internal dynamics of slowly rotating biological systems p 375 A93-49208

The fast rotating clinostat - A history of its use in gravitational biology and a comparison of ground-based and flight experiment results p 376 A93-49212

**ORGANIC CHEMISTRY**

Chemical markers of prebiotic chemistry in hydrothermal systems p 74 A93-18006

Hydrothermal organic synthesis experiments p 74 A93-18007

Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 N93-18551

**ORGANIC COMPOUNDS**

Organic models of interstellar grains p 35 A93-11847

Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824

Comets and the formation of biochemical compounds on the primitive earth - A review p 109 A93-17977

Comets as a possible source of prebiotic molecules p 109 A93-17979

Cometary supply of terrestrial organics - Lessons from the K/T and the present epoch p 109 A93-17981

The fate of organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite p 110 A93-17984

Terrestrial and extraterrestrial sources of molecular homochirality p 110 A93-17986

Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561

Laboratory simulation of organic grain mantles p 268 A93-36554

## ORGANIC LIQUIDS

The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality

[SAE PAPER 921266] p 300 A93-41436

Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate [SAE PAPER 921313] p 303 A93-41475

Generation of iodine disinfection by-products (IDP's) in a water recycle system

[SAE PAPER 921362] p 307 A93-41521

Deep-sea smokers - Windows to a subsurface biosphere? p 397 A93-53284

Hydrothermal dehydration of aqueous organic compounds p 397 A93-53291

The violent environment of the origin of life - Progress and uncertainties p 412 A93-53292

Linear tetrapyrroles (phycobilins) in a model prebiological system p 398 A93-53350

The Moon: Biogenic elements p 113 A93-18548

Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate

[NASA-CR-193278] p 330 A93-30665

## ORGANIC LIQUIDS

Aqueous high-temperature and high-pressure organic geochemistry of hydrothermal vent systems

p 397 A93-53285

## ORGANIC MATERIALS

Carbonaceous chondrites and the origin of life

p 412 A93-55997

Hydrothermal organic synthesis experiments [NASA-CR-191257] p 41 A93-13457

## ORGANIC PHOSPHORUS COMPOUNDS

Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure

p 76 A93-18296

## ORGANISMS

Ground testing of bioconvective variables such as morphological characterizations and mechanisms which regulate macroscopic patterns

p 82 A93-17303

The solar system: Importance of research to the biological sciences p 113 A93-18547

Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle

[NASA-CR-4497] p 269 A93-26157

## ORGANIZING

Flight physiology - Clinical considerations

p 164 A93-28690

## ORGANOMETALLIC COMPOUNDS

Submarine Advanced Integrated Life Support system (SAILS) program

[AD-A253564] p 32 A93-11812

## ORGANS

Investigation of nonlinear dynamic responses to random vibration in dogs

p 4 A93-13722

## ORIENTATION

Influence of animation on dynamical judgments

p 180 A93-28692

The impact of visual noise on spatial orientation

p 257 A93-36229

## ORTHOPEDICS

Design of a portable powered seat lift

p 195 A93-22190

Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 A93-27085

## ORTHOSTATIC TOLERANCE

The responses of cardiovascular during head-up tilt plus lower body negative pressure

p 9 A93-11690

Blood and urine responses to ingesting fluids of various salt and glucose concentrations --- to combat orthostatic intolerance

p 83 A93-17528

Development of lower body negative pressure as a countermeasure for orthostatic intolerance

p 83 A93-17529

Orthostatic function during a stand test before and after head-up or head-down bedrest

p 84 A93-17530

Human autonomic responses to actual and simulated weightlessness

p 85 A93-17540

Drug effects on orthostatic intolerance induced by bedrest

p 86 A93-17544

Posture and the circulation - The age effect

p 93 A93-20653

Cardiovascular physiology in space flight

p 93 A93-20654

Cardiovascular responses to lower body negative pressure in trained and untrained older men

p 115 A93-21686

Effect of prolonged antihypertensive bed rest hypokinesia on functional properties of the neuromuscular system in humans

p 116 A93-23151

Increased orthostatic blood pressure variability after prolonged head-down tilt

p 161 A93-28676

Influence of ten-day head-down bedrest on human carotid baroreceptor-cardiac reflex function

p 161 A93-28678

Effects of head-down tilt for 10 days on the compliance of the leg

p 162 A93-28680

Carotid-cardiac baroreflex response and LBNP tolerance following resistance training

p 164 A93-28696

Aerobic fitness. I - Response of volume regulating hormones to head-down tilt

p 167 A93-28721

Hemodynamic status of humans during a graded orthostatic test

p 248 A93-35221

Diurnal rhythmicity of human orthostatic stability

p 250 A93-35253

Hemodynamics in monkeys during antihypertensive hypokinesia at angles of -6 and -20 deg

p 241 A93-35259

Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses

p 278 A93-39716

Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance

p 280 A93-41119

Protective effects of *Rhodiola crenulata* on rats under antihypertensive position and professional athletes

p 327 A93-44843

Changes in the central hemodynamics under antihypertensive in humans with different blood circulation types and physical training levels

p 359 A93-46967

Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt

p 379 A93-49220

Hormonal responses during orthostasis following 4 hours of head-down tilt

p 379 A93-49221

Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest

p 386 A93-52404

Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress

p 401 A93-55165

Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females

[NASA-TP-3298] p 128 A93-20318

## OSCILLATIONS

Perceptual scaling of whole-body low frequency linear oscillatory motion

p 379 A93-49225

## OSMOSIS

Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT

p 163 A93-28688

Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions

p 200 A93-31188

## OSTEOPOROSIS

Age-related bone changes

p 93 A93-20655

Can the adult skeleton recover lost bone?

p 93 A93-20656

The mechanical control system of bone in weightless spaceflight and in aging

p 94 A93-20657

Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton

p 155 A93-28728

Prevention of space flight induced soft tissue calcification and disuse osteoporosis

p 214 A93-31545

## OTOLITH ORGANS

Antagonistic otolith-visual units in cat vestibular nuclei

p 199 A93-30511

Interlabyrinth otolith asymmetry under normal conditions and after the effect of a gravity change

p 242 A93-35264

Role of the vestibular end organs in experimental motion sickness - A primate model

p 399 A93-55933

Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility

[NASA-CR-193304] p 363 A93-32364

## OUTER SPACE TREATY

The province and heritage of mankind reconsidered: A new beginning

p 69 A93-14018

## OVARIES

Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level

p 44 A93-15165

Melatonin in human preovulatory follicular fluid

p 215 A93-32474

Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats

p 329 A93-44934

## OVERPRESSURE

Measurement and evaluation of blast overpressure during F-15A crew station vulnerability assessment test

[AD-A257152] p 104 A93-18033

## OXIDATION

Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia

p 169 A93-28751

Lipid peroxidation and the antioxidant defense system in rats after a 13-day flight on the Cosmos-1887 biosatellite

p 239 A93-35210

Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions

p 243 A93-35672

Ferrous iron oxidation by anoxygenic phototrophic bacteria

p 271 A93-39280

Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process

[SAE PAPER 921275] p 301 A93-41444

Ozone - A new aspect of its effect on microorganisms

p 398 A93-54971

Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates

[AD-A262762] p 285 A93-28939

## OXIDATION-REDUCTION REACTIONS

Integrated oxygen recovery system

[NASA-CR-192343] p 234 A93-22663

Integrated oxygen recovery system

[NASA-CR-192982] p 267 A93-26088

Investigation of laser-induced retinal damage

[AD-A264096] p 338 A93-31094

## OXYGEN

Effects of oxygen on regulation of cerebral blood flow in rabbits adapted to hypoxia

p 3 A93-13545

Control of breathing under conditions of altered atmospheric density during muscular work

p 89 A93-18288

Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain

p 77 A93-18300

Dynamic characteristic of changes of oxygen saturation of blood hemoglobin under conditions of acute hypoxia in human body

p 91 A93-19993

Rett syndrome - Stimulation of endogenous biogenic amines

p 164 A93-28697

Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft

[AD-A253648] p 31 A93-11279

Postoperative hyperbaric oxygen treatment of peripheral nerve damage

[AD-A255842] p 52 A93-14084

Nifedipine for treatment of high altitude pulmonary edema

[AD-A256959] p 95 A93-16187

Membrane technology: A search for membranes for submarine atmosphere control

[AD-A260581] p 266 A93-25904

Oxygen production on the Lunar materials processing frontier

p 315 A93-27967

## OXYGEN BREATHING

Effects of different inhaled O2 concentrations on ventilatory and heart rate kinetic responses during exercise

p 11 A93-13707

The role of ground level oxygen in the treatment of altitude chamber decompression sickness

p 89 A93-18043

An analysis of the respiratory muscle fatigue under resistive loading when breathing gas mixtures containing different amounts of oxygen

p 76 A93-18299

An analytical model of the aircrew oxygen breathing system

p 137 A93-25123

## OXYGEN CONSUMPTION

Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats

p 75 A93-18039

Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water

p 94 A93-20898

Increased plasma O2 solubility improves O2 uptake of in situ dog muscle working maximally

p 111 A93-21684

Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion

p 115 A93-21685

Energetics of walking and running - Insights from simulated reduced-gravity experiments

p 116 A93-21687

The problem of oxygen regimen in extreme conditions

p 160 A93-27685

Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight

p 272 A93-40773

Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats

p 323 A93-42192

Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge

p 379 A93-49178

Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and unfit men

p 385 A93-52304

## OXYGEN ISOTOPES

New techniques for positron emission tomography in the study of human neurological disorders

[DE93-002098] p 95 A93-15900

## OXYGEN MASKS

A new protective breathing apparatus

p 29 A93-13535

## SUBJECT INDEX

An analytical model of the aircrew oxygen breathing system p 137 A93-25123  
Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757

### OXYGEN METABOLISM

Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028  
Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally p 111 A93-21684  
Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685  
Characteristics of the effect of inert gases on in vivo tissue respiration p 112 A93-23152

### OXYGEN PRODUCTION

Algae and oxygen in earth's ancient atmosphere p 153 A93-27800  
A low pressure electrolyzer for the next generation submarine [SAE PAPER 921125] p 291 A93-41316  
Oxygen generation by static feedwater electrolysis for Space Station Freedom [SAE PAPER 921151] p 293 A93-41335  
OCAM - A CELSS modeling tool: Description and results --- Object-oriented Controlled Ecological Life Support System Analysis and Modeling [SAE PAPER 921241] p 298 A93-41413  
Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization [SAE PAPER 921391] p 309 A93-41549  
Submarine Advanced Integrated Life Support system (SAILS) program [AD-A253564] p 32 N93-11812  
A membrane-based subsystem for water-vapor recovery from plant-growth chambers [NASA-CR-177602] p 149 N93-20065  
Comparison of portable crewmember protective breathing equipment (CPBE) designs [DOT/FAA/AM-93/6] p 310 N93-27121  
Oxygen production on the Lunar materials processing frontier p 315 N93-27967  
SPE water electrolyzers in support of the lunar outpost p 315 N93-27977  
Hybrid oxygen system [AD-A262417] p 317 N93-28464

### OXYGEN SUPPLY EQUIPMENT

Human factors in design of military aircrafts' oxygen supply equipment p 60 A93-14222  
An analytical model of the aircrew oxygen breathing system p 137 A93-25123  
Study on environment control and life support technology p 149 N93-20413  
Integrated oxygen recovery system [NASA-CR-192343] p 234 N93-22663  
Integrated oxygen recovery system [NASA-CR-192982] p 267 N93-26088  
Comparison of portable crewmember protective breathing equipment (CPBE) designs [DOT/FAA/AM-93/6] p 310 N93-27121  
Evolution of Space Station EMU PLSS technology recommendations p 312 N93-27790  
Hybrid oxygen system [AD-A262417] p 317 N93-28464

### OXYGEN TENSION

Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia p 76 A93-18295  
Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally p 111 A93-21684  
Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751  
Interactions between Hb, Mg, DPG, ATP, and Cl determine the change in Hb-O<sub>2</sub> affinity at high altitude p 279 A93-41117  
Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements [SAE PAPER 921347] p 305 A93-41506  
Lunar base pressure, O<sub>2</sub> fraction, and ExtraHabitat Activity suit design p 346 A93-42125  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191

### OXYGEN 18

Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 N93-23734

### OXYGENATION

The role of ground level oxygen in the treatment of altitude chamber decompression sickness p 89 A93-18043  
The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294

New aspects of using hyperbaric oxygenation in aviation medicine p 252 A93-36742  
Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A256340] p 55 N93-15198

### OZONE

Ozone - A new aspect of its effect on microorganisms p 398 A93-54971  
The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO [DE92-019411] p 5 N93-11630

## P

### PAIN

Molecular mechanisms of stress --- of astronauts during various phases of their lunar and Martian travels p 49 A93-17443  
Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study p 216 A93-32786  
The effect of pain on task performance: A review of the literature [AD-A254336] p 59 N93-15216

### PALEOBIOLOGY

The earliest fossil evidence for sexual dimorphism in primates p 152 A93-27775  
Multiple evolutionary origins of magnetotaxis in bacteria p 153 A93-27799  
Algae and oxygen in earth's ancient atmosphere p 153 A93-27800  
Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377  
First skulls of the early Eocene primate *Shoshonius cooperi* and the anthropoid-tarsier dichotomy p 202 A93-32670  
Microfossils of the Early Archean Apex chert - New evidence of the antiquity of life p 272 A93-40308  
Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystriocomorphous rodent (Mammalia: Rodentia) p 328 A93-44903  
Chloroflexus aurantiacus and ultraviolet radiation - Implications for Archean shallow-water stromatolites p 400 A93-55999

### PALEONTOLOGY

Geography of end-Cretaceous marine bivalve extinctions p 273 A93-41075

### PARABOLIC FLIGHT

Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533  
Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547  
Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 366 A93-52405

### PARALLEL PROCESSING (COMPUTERS)

Simulation of excitatory/inhibitory interactions in single auditory neurons [AD-A253614] p 50 N93-13252  
Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 N93-28850  
Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853

### PARALYSIS

Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781

### PARASITIC DISEASES

Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 N93-11283  
Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300  
Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304  
Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 N93-11307  
Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308

### PARKINSON DISEASE

Electromyographic investigations of tremor in aquanauts in simulated immersions p 90 A93-18292  
A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918  
Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029

### PARTIAL PRESSURE

The evaluation of tolerance to serious acute hypoxia in humans p 11 A93-13715

## PATTERN RECOGNITION

Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements [SAE PAPER 921347] p 305 A93-41506

### PARTICLE ACCELERATORS

Radiation physics, biophysics, and radiation biology [DE92-013673] p 6 N93-12266

### PARTICULATES

Potential health hazards from thermal degradation events - Particulate vs. gas phase effects [SAE PAPER 921388] p 282 A93-41546

### PARTITIONS (STRUCTURES)

Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835

### PASSENGER AIRCRAFT

Radiation conditions onboard passenger aircraft p 249 A93-35230  
Control of infection in an international airline p 407 A93-52867

### PASSENGERS

Upper interior head protection. Volume 1. The development of a research test procedure [PB93-13769] p 194 N93-21537

### PATHOGENESIS

Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro [DE92-013510] p 13 N93-10626  
Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835  
Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287  
HIV variability and perspectives of a vaccine p 16 N93-11294

Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297  
In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automatized enzyme immunoassay method to dose specific IgE p 21 N93-11314

### PATHOLOGICAL EFFECTS

Microwaves and the visual analyzer p 250 A93-35247  
Combined effect of head-down tilt and gamma rays on the higher nervous activity of rats p 242 A93-35262  
Structural and cytochemical signs of the development of deadaptation, as determined from blood characteristics p 252 A93-36724  
Artificial gravity augmentation on the moon and Mars p 346 A93-42127  
Carboxyalkylated hemoglobin as a potential blood substitute [AD-A252329] p 22 N93-11561

### PATHOLOGY

AFRR reports [AD-A254581] p 49 N93-12649  
Training, muscle fatigue and stress fractures [AD-A255277] p 54 N93-15006  
27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696  
Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 N93-19698  
The prevalence of artificial lens implants in the civil airman population [DOT/FAA/AM-92/14] p 253 N93-25214

### PATIENTS

X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 N93-18295  
Development and enhancement of a mode of performance and decision making under stress in a real life setting [AD-A257796] p 123 N93-18363  
Automatic detection of seizures with applications p 254 N93-25592  
A fiber optic probe for the detection of cataracts p 254 N93-25593  
Neuropsychological components of object identification [AD-A261449] p 259 N93-26347

### PATTERN RECOGNITION

Contextual change and skill acquisition in visual search - Does the rate of change affect performance? p 178 A93-27187  
Effects of display luminance on the recognition of color symbols on similar color backgrounds p 189 A93-27191  
Psychophysical analyses of perceptual representations [AD-A255432] p 58 N93-14510



- A toposcopic investigation of brain electrical activity induced by motion sickness  
[AD-A259024] p 124 N93-18952
- Recognition of partially occluded threat objects using the annealed Hopfield network p 142 N93-19466
- G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775
- Perception/action: An holistic approach  
[AD-A259597] p 235 N93-24067
- Computer based analysis and synthesis of retinal function  
[AD-A260514] p 221 N93-24420
- Facilitation and interference in identification of pictures and words  
[AD-A261484] p 260 N93-26356
- Spontaneous discovery and use of categorical structure  
[AD-A261658] p 260 N93-26364
- Computing with neural maps: Application to perceptual and cognitive function  
[AD-A264056] p 341 N93-30033
- Representations of shape in object recognition and long-term visual memory  
[AD-A264342] p 341 N93-30163
- An algorithm for simple and complex feature detection: From retina to primary visual cortex  
[AD-A264306] p 337 N93-30897
- A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever  
[NASA-CR-193301] p 365 N93-31844
- PAYLOAD INTEGRATION**
- Design and evaluation of a payload to support plant growth onboard COMET 1  
[SAE PAPER 921389] p 308 A93-41547
- PAYLOADS**
- Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780
- PEEK**
- The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569
- PENDULUMS**
- Influence of animation on dynamical judgments p 98 A93-20275
- PEPTIDES**
- Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968
- Vagotrophic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749
- Atrial natriuretic peptide degradation by CPA47 cells - Evidence for a divalent cation-independent cell-surface proteolytic activity p 155 A93-28726
- Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792
- Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans p 381 A93-49293
- Role of the central nervous system in the control of hibernation p 378 A93-51025
- Kinetics of peptide hydrolysis and amino acid decomposition at high temperature --- space biochemical evolution p 411 A93-53289
- A model for the prebiotic synthesis of peptides which throws light on the origin of the genetic code and the observed chirality of life p 412 A93-56000
- Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171 p 20 N93-11309
- Neurochemical control of circadian rhythms  
[AD-A255054] p 50 N93-13116
- Organization of the human circadian system  
[AD-A264675] p 361 N93-32015
- PERCEPTION**
- The influence of flight experience on midair collision risk perception p 180 A93-28707
- Cognitive function at high altitude p 386 A93-52505
- Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures p 405 A93-55348
- PERCEPTUAL ERRORS**
- Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176
- Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size p 224 A93-32788
- PERFLUORO COMPOUNDS**
- Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally p 111 A93-21684
- PERFORMANCE PREDICTION**
- Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation p 186 A93-27148
- Predictive validity of an automated personality inventory for Air Force pilot selection p 179 A93-27452
- Predicting individual differences in complex skill acquisition - Dynamics of ability determinants p 181 A93-28731
- Predicting skeletal adaptation in altered gravity environments p 213 A93-30772
- Proposed evaluation framework for assessing operator performance with multisensor displays p 232 A93-33444
- Timing considerations of Helmet Mounted Display performance p 233 A93-33449
- Structured interviews for pilot selection - No incremental validity p 286 A93-39572
- Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223
- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables  
[AD-A254681] p 27 N93-12225
- Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H  
[AD-A254939] p 63 N93-12545
- Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool  
[AD-A258531] p 195 N93-21753
- A cognitive architecture for human performance process model research  
[AD-A261040] p 258 N93-25815
- Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements p 351 N93-29484
- Predicting aircrew training performance with psychometric g  
[AD-A264021] p 340 N93-30026
- PERFORMANCE TESTS**
- Methods for test and evaluation of night vision goggle integrated helmets p 188 A93-27182
- Helmet-mounted systems test and evaluation process p 227 A93-30053
- Neurobehavioral test in civil aviation flight personnel p 223 A93-30443
- Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782
- Development of a test protocol for evaluating EVA glove performance  
[SAE PAPER 921254] p 298 A93-41424
- Performance evaluation of candidate space suit elements for the next generation orbital EMU  
[SAE PAPER 921344] p 305 A93-41503
- A low cost helmet-mounted camera/display system for field testing teleoperator tasks p 408 A93-53122
- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions  
[AD-A252820] p 26 N93-11779
- Thermal control systems for low-temperature heat rejection on a lunar base  
[NASA-CR-191286] p 65 N93-13717
- Evaluation and estimation of handling qualities via statistical modeling of pilot response data  
[AD-A255324] p 69 N93-14548
- Validity of clinical color vision tests for air traffic control specialists  
[AD-A258219] p 123 N93-18301
- Stimulus presentation formats and measurement techniques for the quantification of target detection performance  
[AD-A258933] p 133 N93-19449
- Measuring hearing protection device performance using the metrosonics db-3100 sound level analyzer (dosimeter)  
[AD-A260852] p 265 N93-25787
- Performance measurement systems: A best practices study  
[AD-A262180] p 350 N93-29444
- PERIODIC VARIATIONS**
- Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049
- PERIPHERAL CIRCULATION**
- Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients p 88 A93-18036
- Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775
- Autorosette formation in the peripheral blood of people with lengthy limitations of motor activity p 250 A93-35245
- Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716
- Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560
- PERIPHERAL NERVOUS SYSTEM**
- Postoperative hyperbaric oxygen treatment of peripheral nerve damage  
[AD-A255842] p 52 N93-14084
- Nerves and tissue repair  
[AD-A255299] p 53 N93-14535
- PERIPHERAL VISION**
- A simple computational model of center-surround receptive fields in the retina  
[AD-A264723] p 336 N93-30515
- PERMEABILITY**
- Effect of simulated weightlessness on microvessel permeability of various organs in rabbits p 199 A93-30438
- Membrane technology: A search for membranes for submarine atmosphere control  
[AD-A260581] p 266 N93-25904
- PERSONALITY**
- Individual differences in airline captains' personalities, communication strategies, and crew performance p 177 A93-27175
- Comparing the Cattell 16PF profiles of male and female commercial airline pilots p 178 A93-27177
- Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 N93-19709
- The five-factor personality model and naval aviation candidates  
[AD-A260227] p 225 N93-24319
- Contribution of personality to the prediction of success in initial air traffic control specialist training  
[DOT/FAA/AM-93/4] p 259 N93-26138
- Accident proneness: A research review  
[DOT/FAA/AM-93/9] p 288 N93-28622
- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011
- PERSONALITY TESTS**
- Preliminary investigation on personality of pilots p 24 A93-13541
- Predictive validity of an automated personality inventory for Air Force pilot selection p 179 A93-27452
- Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780
- Some personality and aptitude characteristics of Air Traffic Control Specialist trainees p 388 A93-52301
- The unique contribution of selected personality tests to the prediction of success in naval pilot training  
[AD-A258144] p 132 N93-18291
- International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection  
[DLR-FB-92-12] p 225 N93-24104
- The five-factor personality model and naval aviation candidates  
[AD-A260227] p 225 N93-24319
- Field test of a computer-driven tool to measure psychological characteristics of aircrew  
[AD-A264484] p 341 N93-30425
- PERSONNEL**
- Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287
- Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292
- Immunological parameters in current and former US Air Force personnel p 16 N93-11295
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 N93-11299
- Susceptibility in USAF recruits to vaccine preventable diseases p 18 N93-11301
- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions  
[AD-A252820] p 26 N93-11779
- Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation  
[AD-A254328] p 23 N93-12145
- Body composition and physical performance  
[AD-A255627] p 69 N93-14161
- Walter Reed Army Institute of Research biannual report  
[AD-A255630] p 52 N93-14162
- The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training  
[AD-A258025] p 131 N93-17919
- Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALs)  
[AD-A258364] p 121 N93-18209
- The US Navy Healthy Back Program: Effect on back knowledge among recruits  
[AD-A258368] p 121 N93-18210

- Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise  
[AD-A259068] p 124 N93-19072
- Organizational politics, participation in decision-making, and job satisfaction  
[DOT/FAA/AM-92/17] p 257 N93-25203
- Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988  
[AD-A260869] p 265 N93-25628
- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011
- Cardiovascular risk factors in an Italian Air Force population: Preliminary report p 362 N93-32252
- PERSONNEL DEVELOPMENT**
- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables  
[AD-A254681] p 27 N93-12225
- Introduction to training decisions modeling technologies: The training decisions system  
[AD-A249862] p 27 N93-12252
- Human factors research in aircrew performance and training: 1986-1991  
[AD-A254455] p 63 N93-12609
- Diversity in biological research  
[NSF-92-19] p 42 N93-13700
- Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool  
[AD-A258531] p 195 N93-21753
- PERSONNEL MANAGEMENT**
- Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575
- A longitudinal examination of applicants to the air traffic control supervisory identification and development program  
[DOT/FAA/AM-92/16] p 257 N93-25213
- Determinants of performance rating accuracy: A field study  
[AD-A264726] p 342 N93-30575
- PERSONNEL SELECTION**
- Poststrike air traffic control trainees - Biodemographic predictors of success in selection and screening p 56 A93-15664
- A new generation of astronauts in space - The astronaut selection process p 57 A93-17071
- Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780
- European astronaut candidates in training in the CIS p 256 A93-34593
- Ab initio pilot training process more efficient than traditional methods p 387 A93-49276
- Some personality and aptitude characteristics of Air Traffic Control Specialist trainees p 388 A93-52301
- A new test of scanning and monitoring ability: Methods and initial results p 24 N93-10321
- Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers  
[NASA-CR-185679] p 34 N93-12195
- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables  
[AD-A254681] p 27 N93-12225
- The unique contribution of selected personality tests to the prediction of success in naval pilot training  
[AD-A258144] p 132 N93-18291
- Using constraint satisfaction networks to study aircrew selection for advanced cockpits p 140 N93-18293
- Stress resistance as a diagnostic category in air traffic controller selection p 219 N93-24092
- The five-factor personality model and naval aviation candidates p 225 N93-24319
- Selection of astronauts for European space missions p 225 N93-24345
- The European astronauts training programme p 226 N93-24346
- Contribution of personality to the prediction of success in initial air traffic control specialist training  
[DOT/FAA/AM-93/4] p 259 N93-26138
- Abridged procedural guide to aircrew anthropometric accommodation assessment p 366 N93-32006
- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011
- PERSPIRATION**
- Evaluation of two microclimate cooling air vests on a heated mannequin  
[AD-A259410] p 194 N93-21269
- PERTURBATION**
- Adaptation to transient postural perturbations  
[NASA-CR-190959] p 105 N93-16699
- Cellular and tissue injury during nonfreezing cold injury and frostbite  
[AD-A260574] p 254 N93-25900
- PESTICIDES**
- Monitoring human tissues for toxic substances  
[PB92-223239] p 173 N93-21498
- Regenerable biocide delivery unit, volume 2  
[NASA-CR-185701-VOL-2] p 275 N93-27360
- PH**
- Methods development for total organic carbon accountability  
[NASA-CR-184438] p 40 N93-12949
- PHARMACOLOGY**
- Pharmacological effects of mixture of Eleutherococcus (ELE) and Elscholtzia (ELS) p 11 A93-13710
- Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173
- Frontier Symposium on Clinical Pharmacology in Space, 10th, Houston, TX, May 10, 11, 1990, Proceedings p 83 A93-17527
- Pharmacologic considerations for Shuttle astronauts p 85 A93-17537
- New pharmacologic approaches to the prevention of space/motion sickness p 85 A93-17538
- Pharmacodynamic aspects of spaceflight p 73 A93-17541
- Optimal sampling theory and population modelling - Application to determination of the influence of the microgravity environment on drug distribution and elimination p 85 A93-17542
- Effects of gravity on gastric emptying, intestinal transit, and drug absorption p 85 A93-17543
- Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility p 116 A93-24037
- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728
- Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypertensive hypokinesia p 170 A93-28760
- Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703
- Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705
- Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711
- Protective effects of Rhodiola crenulata on rats under antihypertensive position and professional athletes p 327 A93-44843
- Comparison of treatment strategies for space motion sickness p 386 A93-52402
- JPRS report: Science and technology, Central Eurasia: Life sciences p 40 N93-13033
- [JPRS-ULS-92-024] p 40 N93-13033
- The neurochemical and neuropharmacological basis of motion sickness  
[NASA-CR-190957] p 50 N93-13061
- Autoradiographic distribution and applied pharmacological characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs p 54 N93-15009
- [AD-A255607] p 54 N93-15009
- AFRRRI Reports --- Radiobiology p 80 N93-15965
- [AD-A257231] p 80 N93-15965
- Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis  
[AD-A255582] p 95 N93-16041
- Pharmacokinetics and Pharmacodynamics in Space  
[NASA-CP-10048] p 333 N93-29502
- Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures  
[AD-A264179] p 336 N93-30882
- PHASE MODULATION**
- Demodulation processes in auditory perception  
[AD-A255748] p 54 N93-15053
- PHILOSOPHY**
- Ontology of mind, subjective ontology, and the example of temporal expressions p 26 N93-11212
- [REPT-92-018] p 26 N93-11212
- The lunar community church: Contributions to lunar living and to evolution of ethical and spiritual thinking p 57 N93-14020
- PHOSPHENE**
- Roentgenophosphene as an indicator of the radiation excitability of the central nervous system p 325 A93-43078
- PHOSPHORUS**
- Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats p 77 A93-19994
- PHOSPHORYLATION**
- Flavine-dependent processes in model prebiological systems p 372 A93-47125
- PHOTICS**
- Neurophysiological analysis of circadian rhythm entrainment  
[AD-A264681] p 361 N93-32018
- PHOTOCHEMICAL REACTIONS**
- Photo and thermal reactions of ferrous hydroxide --- formation of hydrogen in Archaean ocean relevant to chemical origin of life p 269 A93-36561
- Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280
- A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019916] p 40 N93-13083
- Primary charge separation in isolated photosystem 2 reaction centers  
[DE92-041128] p 82 N93-17189
- Investigation of laser-induced retinal damage  
[AD-A264096] p 338 N93-31094
- PHOTOCONDUCTIVITY**
- Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity p 1 A93-11199
- PHOTOELECTRIC EMISSION**
- Kinetic studies of interfacial photocurrents in platinized chloroplasts  
[DE93-002344] p 211 N93-25104
- PHOTOELECTRICITY**
- Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing  
[DE93-006411] p 210 N93-24028
- PHOTOELECTROCHEMISTRY**
- Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity p 1 A93-11199
- PHOTOLYSIS**
- Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824
- Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical ozonation process  
[SAE PAPER 921234] p 297 A93-41408
- PHOTONS**
- Stimulation of lettuce productivity by manipulation of diurnal temperature and light p 327 A93-44879
- Effects of CO2 and photosynthetic photon flux on yield, gas exchange and growth rate of *Lactuca sativa* L. 'Waldmann's Green' p 397 A93-52723
- Investigation of laser-induced retinal damage  
[AD-A264096] p 338 N93-31094
- PHOTOOXIDATION**
- Flavine-dependent processes in model prebiological systems p 372 A93-47125
- Linear tetrapyrroles (phycobilins) in a model prebiological system p 398 A93-53350
- Investigation of laser-induced retinal damage  
[AD-A264096] p 338 N93-31094
- PHOTORECEPTORS**
- Photoreceptors regulating circadian behavior: A mouse model  
[AD-A264881] p 337 N93-30908
- Melatonin, the pineal gland, and circadian rhythms  
[AD-A264099] p 337 N93-31061
- PHOTOSYNTHESIS**
- Stimulation of lettuce productivity by manipulation of diurnal temperature and light p 327 A93-44879
- Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce p 357 A93-46468
- Effects of CO2 and photosynthetic photon flux on yield, gas exchange and growth rate of *Lactuca sativa* L. 'Waldmann's Green' p 397 A93-52723
- Resource capture by single leaves  
[DE92-015847] p 5 N93-10461
- The potential effects of concurrent increases in temperature, CO2 and O3 on net photosynthesis, as mediated by rubisCO p 5 N93-11630
- Nitrogen control of chloroplast development and differentiation  
[DE92-017392] p 39 N93-12768
- Phytoplankton photosynthesis in natural mixed layers  
[AD-A255010] p 39 N93-12871
- Primary charge separation in isolated photosystem 2 reaction centers  
[DE92-041128] p 82 N93-17189
- The effects of prolonged growth in elevated CO2 concentrations in the field on the amounts of different leaf proteins  
[DE93-002940] p 115 N93-19751
- Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628

- Kinetic studies of interfacial photocurrents in platinized chloroplasts  
[DE93-002344] p 211 N93-25104  
Regulation of alternative CO<sub>2</sub> fixation pathways in prokaryotic and eucaryotic photosynthetic organisms  
[DE93-012109] p 276 N93-29181

**PHOTOTROPISM**

- Investigation of wheat coleoptile response to phototropic stimulations  
[NASA-CR-192157] p 114 N93-18608

**PHYSICAL EXAMINATIONS**

- Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force  
p 16 N93-11292  
Transcutaneous Analyte Measuring Methods (TAMM), phase 2  
[AD-A256327] p 54 N93-15192  
Improved head support stand adjustable by compound turnbuckle  
[AD-D015384] p 55 N93-15249  
Guide for aviation medical examiners  
[PB92-219690] p 172 N93-21047  
Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces  
p 370 N93-32260  
Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service  
p 370 N93-32261

**PHYSICAL EXERCISE**

- Characteristics of heart rate response (HRR) in young men during exercise  
p 10 A93-13706  
Effects of different inhaled O<sub>2</sub> concentrations on ventilatory and heart rate kinetic responses during exercise  
p 11 A93-13707  
Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training  
p 37 A93-14970  
The mechanical control system of bone in weightless spaceflight and in aging  
p 94 A93-20657  
Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion  
p 115 A93-21685  
Energetics of walking and running - Insights from simulated reduced-gravity experiments  
p 116 A93-21687  
Cardiovascular responses during recovery from exercise and thermal stress  
p 212 A93-30282  
Effects of sleep deprivation and exercise on glucose tolerance  
p 281 A93-41165  
Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure  
p 281 A93-41168  
Performance and mood-state parameters during 30-day 6 deg head-down bed rest with exercise training  
p 281 A93-41169  
Simulating reduced gravity - A review of biomechanical issues pertaining to human locomotion  
p 289 A93-41175  
Program development for exercise countermeasures  
[SAE PAPER 921140] p 292 A93-41327  
Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise  
p 331 A93-42188  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents  
p 331 A93-42191  
Baroreflex function and cardiac structure with moderate endurance training in normotensive men  
p 332 A93-44182  
Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs  
p 326 A93-44183  
Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression  
p 327 A93-44184  
Intramuscular pressure and electromyography as indexes of force during isokinetic exercise  
p 380 A93-49291  
Analysis of individual differences between psychological reactions of humans under combined hypoxic stress  
p 388 A93-51115  
Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption  
[AD-A250648] p 23 N93-11893  
Exercise during long term exposure to space: Value of exercise during space exploration  
p 82 N93-16807  
Design of a resistive exercise device for use on the Space Shuttle  
[NASA-CR-192079] p 108 N93-17805  
Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALS)  
[AD-A258364] p 121 N93-18209  
Two techniques for measuring locomotion impact forces during zero G  
[NASA-TP-3305] p 217 N93-23410

AFTERRISE: Deep body temperature following exercise

- [AD-A259887] p 218 N93-23984  
Utilization of the graded universal testing system to increase the efficiency for assessing aerobic and anaerobic capacity  
p 246 N93-26077  
Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training  
[AD-A261059] p 267 N93-26229  
Exercise/recreation facility for a lunar or Mars analog  
p 352 N93-29733  
Beta-adrenergic blockade and lactate metabolism during exercise at high altitude  
[AD-A263544] p 334 N93-29820  
Daily exercise routines  
p 360 N93-31455  
The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas  
p 369 N93-32257  
Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots  
p 369 N93-32258

**PHYSICAL FITNESS**

- Physical fitness as a criterion of readiness for spaceflights  
p 98 A93-18412  
Cardiovascular responses to lower body negative pressure in trained and untrained older men  
p 115 A93-21686  
Aerobic fitness. I - Response of volume regulating hormones to head-down tilt  
p 167 A93-28721  
Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and nonfit men  
p 385 A93-52304  
Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress  
p 401 A93-55165  
Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption  
[AD-A250648] p 23 N93-11893  
A progressive resistance weight training program designed to improve the armor crewman's strength  
[AD-A255553] p 53 N93-14556  
Decision making in a dynamic task environment: The effect of time pressure  
[AD-A256557] p 58 N93-14602  
Exercise during long term exposure to space: Value of exercise during space exploration  
p 82 N93-16807  
Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALS)  
[AD-A258364] p 121 N93-18209  
Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training  
[AD-A261059] p 267 N93-26229  
Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service  
p 370 N93-32261

**PHYSICAL WORK**

- Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894

**PHYSICIANS**

- A physician's workstation designed for NASA and earth-based applications  
p 189 A93-28695

**PHYSIOCHEMISTRY**

- Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids  
p 160 A93-27048  
Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type  
p 153 A93-28698  
Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy  
p 155 A93-28725  
Fires on board aircraft: Toxicological risk in flight  
p 126 N93-19694

**PHYSIOLOGICAL DEFENSES**

- Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue  
p 378 A93-51101  
Physiological stress from chemical defense clothing and equipment  
[AD-A255786] p 51 N93-14028  
Plasmid encoded virulence of Yersinia  
[FOA-B-40419-4.4] p 275 N93-28199

**PHYSIOLOGICAL EFFECTS**

- Subjective and behavioral effects associated with repeated exposure to narcosis  
p 7 A93-10327  
Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels  
p 8 A93-10332  
The influence of prior exercise at anaerobic threshold on decompression sickness  
p 8 A93-10333  
The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system  
p 2 A93-12861

The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration  
p 2 A93-12863

The effect of the activation of the sympatho-adrenal system on catecholamine inactivation in rat lungs  
p 2 A93-12864

Preliminary study on the physiological changes and tolerance in ground squirrels under several specific experimental conditions  
p 2 A93-13532

Preliminary observation of influences of three forms of simulated weightlessness on hemorheological characteristics in rabbit  
p 3 A93-13538

Effects of oxygen on regulation of cerebral blood flow in rabbits adapted to hypoxia  
p 3 A93-13545

Effects of antinotion sickness drug mixture B on ultrastructures of cerebral and cerebellar cortexes in suspended rabbits  
p 10 A93-13704

Effects of +Gz stress on medium- and long-latency auditory evoked responses  
p 11 A93-13708

Pharmacological effects of mixture of *Eleutherococcus* (ELE) and *Elscholtzia* (ELS)  
p 11 A93-13710

Experimental study of volatile metabolites of human body  
p 11 A93-13711

Effect of hypergravity on astronauts in space flight  
p 48 A93-16254

A device for the prolonged restraint of primates in closed-space conditions  
p 77 A93-18302

Development of K.E. Tsiolkovsky's ideas on the interaction between space, nature, and man  
p 90 A93-18408

Windblast tolerance of human thorax and abdomen  
p 91 A93-19992

EEG changes in man during motion sickness induced by parallel swing  
p 92 A93-19996

A physiological signal acquisition and processing system for bed-rest laboratory  
p 103 A93-19998

T wave changes in humans and dogs during experimental dives  
p 92 A93-20026

Heart and lung alterations in neonatal rats exposed to CO or high altitude  
p 77 A93-20027

Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups  
p 78 A93-20030

Energy expenditure climbing Mt. Everest  
p 92 A93-20031

Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects  
p 93 A93-20035

NASA plans and opportunities --- space flight activities throughout the 1990s  
p 79 A93-20652

Cardiovascular physiology in space flight  
p 93 A93-20654

Research on sleep, circadian rhythms and aging - Applications to manned spaceflight  
p 94 A93-20658

Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage  
p 111 A93-23074

Psychophysiological factors which impair the professional reliability of a pilot in emergency situations  
p 129 A93-23150

Effect of prolonged antihypostatic bed rest hypokinesia on functional properties of the neuromuscular system in humans  
p 116 A93-23151

Response of the circadian system to 6 deg head-down tilt bed rest  
p 117 A93-24045

The physiological consequences of simulated helicopter flight in NBC protective equipment  
p 117 A93-24049

Influence of microgravity on immune system and genetic information  
p 160 A93-26572

Self-organizing character of alpha wave in EEG due to acute hypoxic hypoxia in normal subjects  
p 213 A93-30436

Effect of simulated weightlessness on microvessel permeability of various organs in rabbits  
p 199 A93-30438

The effects of prolonged weightlessness and reduced gravity environments on human survival  
p 214 A93-30773

Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights)  
p 247 A93-35214

Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity  
p 240 A93-35224

Accumulation of calcium ions in the myocardial sarcoplasmic reticulum of restrained rats exposed to a pulsed electromagnetic field  
p 240 A93-35225

Central neurophysiological and neurochemical vomiting mechanisms (Review of the literature)  
p 240 A93-35232

Psychophysiological principles of flight training for actions in nonroutine situations  
p 256 A93-35233

Data bank establishment principles as applied to the problem of physiological norms in space medicine  
p 249 A93-35234

## SUBJECT INDEX

Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238

Age-related changes in hemoglobin and erythrocyte levels p 250 A93-35250

Psychosomatic status and flying skill during geomagnetic disturbances p 257 A93-35251

Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252

Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254

Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255

Some indices of humoral immunity in Rhesus monkeys under the effect of extreme space flight factors p 241 A93-35258

Healing of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260

Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670

The state of the endocrine system of rats of different age under conditions of immobilization stress and biomes administration p 242 A93-35671

Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560

Does drinking protect against mountain sickness? p 382 A93-49565

The effects of Benadryl and Hismanal on mood, physiological measures, antihistamine detection, and subjective symptoms p 385 A93-52302

A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets [AD-A252427] p 13 N93-10709

Metabolic factors influencing myocardial recovery from acidosis (CIC3) [AD-A252376] p 14 N93-10796

An overview of gravitational physiology [NASA-TM-102849] p 35 N93-12319

Physiological effects of positive pressure ventilation [AD-A254809] p 49 N93-12751

Thermal stress in US Air Force operations [AD-A255785] p 51 N93-14027

Cardiopulmonary discipline science plan [NASA-TM-108040] p 125 N93-19648

Health effects of low-frequency electric and magnetic fields [DE93-005675] p 127 N93-19838

Neuroscience discipline science plan [NASA-TM-108041] p 128 N93-19882

Regulatory physiology discipline science plan [NASA-TM-108038] p 115 N93-19891

Musculoskeletal discipline science plan [NASA-TM-108039] p 128 N93-19892

Space life sciences overview p 158 N93-21074

Cerebral autoregulation in microgravity p 173 N93-21112

Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 N93-22800

Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 N93-23995

Physiological experiments within the project AustroMir p 219 N93-24354

Influence of microgravity on immune system and genetic information p 220 N93-24370

Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398

The acute inhalation toxicity of pyrolysis products of halon 1301 p 254 N93-25629

Growth factor involvement in tension-induced skeletal muscle growth [NASA-CR-193023] p 282 N93-27113

Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations [DOT/FAA/AM-93/7] p 274 N93-27152

Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations [DOT/FAA/AM-93/8] p 283 N93-27158

Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757

Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 N93-29471

Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 N93-29651

The Environmental Symptoms Questionnaire (ESQ): Development and application [AD-A264127] p 335 N93-30196

Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400

Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 N93-30882

Survey of smoking habits in the Spanish Air Force p 370 N93-32262

Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267

## PHYSIOLOGICAL FACTORS

Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411

Physical fitness as a criterion of readiness for spaceflights p 98 A93-18412

Influence of posture and prolonged head-down tilt on cardiovascular reflexes p 161 A93-28677

Cognitive factors in the air events of the Air Force during the last decade p 134 A93-19682

Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 N93-29502

Cardiovascular risk factors in an Italian Air Force population: Preliminary report p 362 N93-32252

Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force p 369 N93-32255

Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces p 370 N93-32260

## PHYSIOLOGICAL RESPONSES

The adrenalin/noradrenalin and the alpha/beta adrenoreceptor correlations in the myocardium and the adrenergic chronotropic and ionotropic reactions under extreme conditions and during adaptation p 1 A93-10125

The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860

A study of biological effects and characteristics of dynamic responses of organism on landing impact p 10 A93-13533

Response characteristics of semicircular canal in cats under linear acceleration p 3 A93-13536

Characteristics of heart rate response (HRR) in young men during exercise p 10 A93-13706

Effects of different inhalant O<sub>2</sub> concentrations on ventilatory and heart rate kinetic responses during exercise p 11 A93-13707

Effects of +Gz stress on medium- and long-latency auditory evoked responses p 11 A93-13708

The effects of exposure to 50 mT ELF magnetic fields for 96 h on rabbit EEG p 4 A93-13712

Identification of degree of head injury caused by impact loads in dog and rabbit p 4 A93-13720

Altered baseline blood volume and the norepinephrine response to stress in humans p 43 A93-14123

Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165

Subjective reactions and objective assessment of the auditory and ventilatory functions of the middle ear during changes in atmospheric pressure p 45 A93-15174

Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft p 45 A93-15175

Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 A93-15526

Supporting human exploration in space - Biomedical research p 48 A93-17428

Motor activity of animals under elevated pressure p 75 A93-18290

Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293

Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia p 76 A93-18295

Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure p 76 A93-18296

Comparison between VDV and a(rms) using simulated impulsive vibration p 91 A93-19991

Effects of +Gy stress on human body p 92 A93-19997

Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs p 79 A93-20037

Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia p 79 A93-20038

## PHYSIOLOGICAL RESPONSES

Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039

Sleep and circadian rhythms p 94 A93-20659

Study of the functioning of the central and the peripheral contours of the thermoregulation system using a thermophysical model of the rabbit body p 111 A93-23075

Spectral analysis of the electroencephalographic response to motion sickness p 116 A93-24041

Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681

Half-squaring in responses of cat striate cells p 157 A93-28748

Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse p 157 A93-28752

Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208

Lipid peroxidation and the antioxidant defense system in rats after a 13-day flight on the Cosmos-1887 biosatellite p 239 A93-35210

Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212

A comparative analysis of the bone marrow cell composition in rats following a long-duration continuous or interrupted exposure to a hypogeomagnetic field p 240 A93-35213

Informative value of the rerespiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors p 248 A93-35222

Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263

Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704

The prediction of the adaptation of circadian rhythms to rapid time zone changes p 278 A93-39714

Interactions between Hb, Mg, DPG, ATP, and Cl determine the change in Hb-O<sub>2</sub> affinity at high altitude p 279 A93-41117

Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines p 280 A93-41123

Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats p 323 A93-42192

Adjustable temperature level of a physiological thermostat and the feasibility of its precise maintenance p 324 A93-43036

Mechanisms of the antihypoxic effect of taurine p 325 A93-43073

Effect of hypoxic hypoxia on the immune response and some factors of nonspecific resistance of human and animal organisms p 325 A93-43074

Roentgenophosphorescence as an indicator of the radiation excitability of the central nervous system p 325 A93-43078

Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery p 326 A93-44176

Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178

Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179

Behavioral asymmetries of psychomotor performance in rhesus monkeys (Macaca mulatta) - A dissociation between hand preference and skill p 339 A93-44923

The effect of G-experience on heart rate during +Gz loading p 333 A93-45322

The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966

Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096

Effect of spaceflight on human protein metabolism p 360 A93-47097

Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214

Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog Hyla japonica - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561

Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567

Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568

Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569

- Hemodynamic effects of altitude exposure and oxygen administration in chronic obstructive pulmonary disease p 383 A93-49571
- Functional adaptation of different rat skeletal muscles to weightlessness p 377 A93-49575
- Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116
- Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619
- Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats p 398 A93-55329
- Motion and space sickness [ISBN 0-8493-4703-3] p 402 A93-55929
- Motion sickness and evolution p 399 A93-55930
- Animal models in motion sickness research p 399 A93-55936
- Physiology of motion sickness symptoms p 403 A93-55939
- Autogenic-feedback training - A treatment for motion and space sickness p 404 A93-55946
- Eye movements and visual information processing [AD-A250198] p 24 A93-10278
- Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 A93-11146
- Mechanisms of immune failure in burn injury p 15 A93-11285
- Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 A93-11308
- Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 A93-12014
- An overview of gravitational physiology [NASA-TM-102849] p 35 A93-12319
- Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 A93-12566
- Phytoplankton photosynthesis in natural mixed layers [AD-A255010] p 39 A93-12871
- AFRR Reports --- Radiobiology [AD-A257231] p 80 A93-15965
- The Proceedings of the Hypobaric Decompression Sickness Workshop [AD-A257612] p 123 A93-18362
- Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females [NASA-TP-3298] p 128 A93-20318
- Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition [NASA-TP-3297] p 149 A93-20319
- Cerebral autoregulation in microgravity p 173 A93-21112
- Aimed arm movements under changed gravity p 183 A93-21113
- Respiratory response to varying degrees of tilt and lower body negative pressure p 173 A93-21114
- A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 A93-24490
- Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 A93-24738
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-022] p 253 A93-25407
- Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 A93-26066
- Secondary injury factors and preventative treatment [PB93-176014] p 283 A93-27409
- The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness [AD-A263033] p 283 A93-27923
- Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 A93-29502
- Beta-adrenergic blockade and lactate metabolism during exercise at high altitude [AD-A263544] p 334 A93-29820
- Trial of emergency ration of the Spanish Air Force p 368 A93-32247
- Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 A93-32364

# PHYSIOLOGICAL TESTS

- The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system p 2 A93-12861
- The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit p 10 A93-12969

- Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166
- Limitations to the study of man in space in the U.S. space program p 213 A93-30285
- Hemodynamic status of humans during a graded orthostatic test p 248 A93-35221
- Morphological analysis of the hepatic structures in experimental animals after infrasonic exposure p 240 A93-35240
- Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404
- Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407
- Statistical prediction of space motion sickness p 403 A93-55943
- International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection [DLR-FB-92-12] p 225 A93-24104
- Pilot Candidate Selection Method (PCSM): What makes it work? [AD-A262871] p 340 A93-29481
- Daily exercise routines p 360 A93-31455
- PHYSIOLOGY**
- Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439
- Identification of a critical period for motor development in neonatal rats p 157 A93-28764
- Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System p 202 A93-32651
- Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390
- Mechanisms of immune failure in burn injury p 15 A93-11285
- Biomedical Polar Research Workshop Minutes [NASA-TM-108026] p 81 A93-16799
- Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments p 99 A93-16801
- Exercise during long term exposure to space: Value of exercise during space exploration p 82 A93-16807
- A review of models of the human temperature regulation system [AD-A258023] p 120 A93-17918
- Abstracts of papers presented at the annual meeting of the Society of General Physiologists [AD-A257718] p 121 A93-18211
- The role of central monoaminergic systems in arousal and selective attention [AD-A258500] p 122 A93-18264
- Development and enhancement of a mode of performance and decision making under stress in a real life setting [AD-A257796] p 123 A93-18363
- Toxicological investigations of flight accidents: Findings and methods p 126 A93-19695
- Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 A93-19698
- The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 A93-19705
- Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 A93-19708
- Improved inhalation technology for setting safe exposure levels for workplace chemicals p 174 A93-22164
- Bibliography of the Biosciences Division: 1986 to present [DCIEM-92-20] p 209 A93-23343
- A linear, time-varying simulation of the respiratory tract system [DE93-004515] p 218 A93-24009
- Cerebus payload requirements in human physiology p 220 A93-24386
- Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 A93-24738
- Anatomy and physiology of plant conductive systems [PB93-156032] p 245 A93-25877
- Investigation into the common mode rejection ratio of the physiological signal conditioner circuit p 245 A93-26073
- Physiological indices of mental workload [AD-A261692] p 260 A93-26391
- Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 A93-29502
- Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 A93-29620
- Melatonin, the pineal gland, and circadian rhythms [AD-A264099] p 337 A93-31061

- An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine p 360 A93-31917
- PHYTOPLANKTON**
- Phytoplankton photosynthesis in natural mixed layers [AD-A255010] p 39 A93-12871
- New approaches to the measurement of chlorophyll, related pigments and productivity in the sea [NASA-CR-190879] p 42 A93-13612
- How do zooplankton feed? A critical microgravity experiment p 158 A93-21097
- PHYTOTRONS**
- Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921354] p 306 A93-41513
- Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design [SAE PAPER 921356] p 307 A93-41515
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers [NASA-CR-177602] p 149 A93-20065
- Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 A93-29216
- PILOT ERROR**
- Pilot performance with blood alcohol concentrations below 0.04 percent p 46 A93-16151
- Evaluation of the efficiency of the pilot's control activity in a flight simulator p 100 A93-18347
- Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142
- Response to automated function failure cue - An operational measure of complacency p 176 A93-27147
- 'And we were tired' fatigue and aircrew errors p 264 A93-37070
- Modeling human response errors in synthetic flight simulator domain p 141 A93-19464
- Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 A93-19683
- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 A93-28855
- PILOT PERFORMANCE**
- Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots p 7 A93-10326
- An assessment of Turkish Air Force pilots' anxiety and depression levels p 23 A93-10334
- Spatial disorientation and dysfunction of orientation/equilibrium reflexes - Aeromedical evaluation and considerations p 8 A93-10336
- Keeping the pilot in the loop p 29 A93-13413
- Preliminary investigation on personality of pilots p 24 A93-13541
- A reappraisal of aging and pilot performance p 56 A93-15663
- Pilot performance with blood alcohol concentrations below 0.04 percent p 46 A93-16151
- Success rate analysis of Navy SERGRAD Flight Training p 56 A93-16152
- The efficiency of a prophylactic-rehabilitational treatment of civil-aviation flight crews p 91 A93-18415
- Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots p 91 A93-18416
- Ergonomic aspects of the presentation of piloting-navigation information p 101 A93-18531
- Psychophysiological factors which impair the professional reliability of a pilot in emergency situations p 129 A93-23150
- Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus p 130 A93-25209
- HUD climb/dive ladder configuration and unusual attitude recovery p 185 A93-27129
- The effect of roll-stabilized sensor information on pilot performance p 175 A93-27130
- Individual pilot differences related to situation awareness p 175 A93-27137
- Insights into pilot situation awareness using verbal protocol analysis p 175 A93-27138
- Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation --- Task Load Index p 175 A93-27139
- The effect of type of task, degree of integration, and modality on the performance of concurrent tasks p 175 A93-27140
- Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice p 186 A93-27145
- Response to automated function failure cue - An operational measure of complacency p 176 A93-27147
- Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation p 186 A93-27148

- Colour head-up displays - Help or hindrance?  
p 187 A93-27154
- Performance differences in psychomotor and dichotic listening tests among landing craft air cushion vehicle operator trainees  
p 177 A93-27174
- Individual differences in computerized test performance for systems integration in cockpit management  
p 177 A93-27176
- Testing a subjective metric of situation awareness  
p 178 A93-27183
- Human factors issues in the use of night vision devices  
p 189 A93-27193
- The effect of low blood alcohol levels on pilot performance in a series of simulated approach and landing trials  
p 179 A93-27453
- Pilot interaction with cockpit automation - Operational experiences with the Flight Management System  
p 189 A93-27455
- Helmet-mounted systems technology planning for the future  
p 227 A93-30052
- Color helmet display for the tactical environment - The pilot's chromatic perspective  
p 227 A93-30058
- Psychophysiological principles of flight training for actions in nonroutine situations  
p 256 A93-35233
- Psychosomatic status and flying skill during geomagnetic disturbances  
p 257 A93-35251
- Alcoholism and treatment in airline aviators - One company's results  
p 257 A93-35499
- Helmet Mounted Display symbology integration research  
p 263 A93-35914
- The impact of visual noise on spatial orientation  
p 257 A93-36229
- Influence of aging and practice on piloting tasks  
p 286 A93-39708
- Flight deck automation and pilot workload  
[SAE PAPER 921132] p 291 A93-41320
- Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport  
[SAE PAPER 921133] p 291 A93-41321
- A study of decision making and performance in rejected takeoffs  
[SAE PAPER 921134] p 287 A93-41322
- A cognitive classification of pilot performance in air combat  
p 347 A93-42814
- Failure mode workload theory and planning  
p 349 A93-42848
- A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object  
p 364 A93-45685
- The effects of history and predictive information on the ability of the transport aircraft pilot to predict an alert  
p 365 A93-46810
- Helmet slippage during visual tracking - The effect of voluntary head movements  
p 389 A93-49223
- Flight crew sleep during multiple layover polar flights  
p 380 A93-49226
- The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator  
p 384 A93-52299
- Modeling strategic behavior in human-automation interaction - Why an 'aid' can (and should) go unused  
p 394 A93-52502
- Virtual landings --- developing Enhanced Vision Systems for VFR  
p 410 A93-54868
- Flight leads and crisis decision-making  
p 404 A93-55161
- Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots  
p 401 A93-55163
- The problem of the pilot's professional reliability  
p 410 A93-55334
- Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1  
[AD-A254138] p 25 N93-10662
- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713
- Relating flying hours to aircrew performance: Evidence for attack and transport missions  
[AD-A253988] p 25 N93-10719
- Relating cognitive function to military aviator performance in early HIV infection  
p 17 N93-11298
- Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles  
[AD-A254983] p 35 N93-12508
- Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H  
[AD-A254939] p 63 N93-12545
- Evaluation and estimation of handling qualities via statistical modeling of pilot response data  
[AD-A255324] p 69 N93-14548
- The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600
- Monitoring of pilot actions as part of a knowledge-based system for pilot assistance  
p 59 N93-15184
- Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 N93-17817
- Flight director information and pilot performance in instrument approaches  
[AD-A258186] p 131 N93-17857
- An analysis of a sustained flight operation training mission in Navy attack aircraft  
[AD-A258199] p 131 N93-18205
- Automatic information processing and high performance skills  
[AD-A258473] p 132 N93-18273
- Modeling the performance of the human (pilot) interaction in a synthetic flight domain: Information theoretic approach  
p 141 N93-19465
- Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment  
[AD-A259909] p 235 N93-23995
- Attention factors associated with head-up display and helmet-mounted display systems  
[AD-A260204] p 235 N93-24001
- Attitude awareness enhancements for the F-16 head-up display  
[AD-A260280] p 236 N93-24168
- Age 60 Project: Consolidated database experiments  
[HS-TR-8025-3C(R2)] p 314 N93-27851
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies  
[AGARD-CP-520] p 317 N93-28850
- Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing  
p 317 N93-28853
- Pilot intent and error recognition as part of a knowledge based cockpit assistant  
p 318 N93-28855
- The design and development of the new RAF standard HUD format  
p 318 N93-28856
- Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1  
p 318 N93-28857
- The quest for an integrated flying helmet  
p 319 N93-28860
- The physiological limitations of man in the high G environment  
p 319 N93-28861
- Oculo-motor responses and virtual image displays  
p 319 N93-28862
- Human capabilities and limitations in situation awareness  
p 319 N93-28863
- Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of the modeling and simulation techniques for predicting radiation induced performance decrements  
[AD-A262872] p 351 N93-29484
- An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information  
[AD-A263874] p 353 N93-29888
- Field test of a computer-driven tool to measure psychological characteristics of aircrew  
[AD-A264484] p 341 N93-30425
- The effects of superimposing symbology on a simulated night vision goggle display  
[AD-A263458] p 354 N93-30590
- Training effectiveness assessment: Methodological problems and issues  
p 342 N93-30684
- Computer-generated parallel tests for aptitude measurement in the selection of aviation operators  
[DLR-FB-92-29] p 343 N93-31229
- The test memorization of symbols and numbers: A computer generated test for visual sensitivity  
p 343 N93-31233
- The concentration loading test system: A computer generated process for acquisition of attentiveness control  
p 344 N93-31235
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability  
p 344 N93-31236
- The PARAT tests as examination system  
p 344 N93-31238
- Nutrition, Metabolic Disorders and Lifestyle of Aircrew  
[AGARD-CP-533] p 367 N93-32240
- Nutritional assessment of United States tactical air command pilots  
p 367 N93-32242
- Changes in food and energy intake in military aircrew  
p 368 N93-32246
- Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school  
p 368 N93-32248
- Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies  
p 362 N93-32253
- Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces  
p 363 N93-32254
- Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force  
p 369 N93-32255
- The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas  
p 369 N93-32257
- Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots  
p 369 N93-32258
- Survey of smoking habits in the Spanish Air Force  
p 370 N93-32262
- The effects of an antijet lag diet  
p 370 N93-32263
- Subjective mood and fatigue of C-141 crew during Desert Storm  
p 370 N93-32264
- C-141 aircrew sleep and fatigue during the Persian Gulf conflict  
p 371 N93-32265
- Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict  
p 371 N93-32268
- Effects of caffeine on mental performance and mood: Implications for aircrew members  
p 372 N93-32269
- PILOT SELECTION**
- Short-term retest reliability of an experimental U.S. Air Force pilot candidate selection test battery  
p 86 A93-15661
- Recent developments in U.S. Air Force pilot candidate selection and classification  
p 97 A93-18046
- Predictive validity of an automated personality inventory for Air Force pilot selection  
p 179 A93-27452
- 'Screening-Controlling' Psychological Selection System for Air Force pilot cadet  
p 222 A93-30440
- Structured interviews for pilot selection - No incremental validity  
p 286 A93-39572
- Photo-Refractive Keratectomy (PRK) - Threat or millennium for military pilots?  
p 401 A93-55169
- The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting  
p 21 N93-11312
- Asthma in aircrew: Assessment, treatment, and disposition  
p 21 N93-11315
- Using constraint satisfaction networks to study aircrew selection for advanced cockpits  
[AD-A258151] p 140 N93-18293
- International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection  
[DLR-FB-92-12] p 225 N93-24104
- The five-factor personality model and naval aviation candidates  
[AD-A260227] p 225 N93-24319
- Pilot Candidate Selection Method (PCSM): What makes it work?  
[AD-A262871] p 340 N93-29481
- Computer-generated parallel tests for aptitude measurement in the selection of aviation operators  
[DLR-FB-92-29] p 343 N93-31229
- Phases of the project development and examination methodologies  
p 343 N93-31231
- The position test: A computer generated process for acquisition of inductive logic thinking  
p 343 N93-31232
- The test memorization of symbols and numbers: A computer generated test for visual sensitivity  
p 343 N93-31233
- The clearance test: A computer generated process for acquisition of auditive short term sensitivity  
p 343 N93-31234
- The concentration loading test system: A computer generated process for acquisition of attentiveness control  
p 344 N93-31235
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability  
p 344 N93-31236
- The PARAT tests as examination system  
p 344 N93-31238
- Abridged procedural guide to aircrew anthropometric accommodation assessment  
[AD-A265220] p 366 N93-32006
- PILOT TRAINING**
- Assessing for preflight predictors of airsickness  
p 8 A93-10335
- The USAF Test Pilot School flight control systems curriculum  
[AIAA PAPER 92-4067] p 24 A93-11253
- Human factors on advanced flight decks; Proceedings of the Conference, London, United Kingdom, Mar. 14, 1991  
[ISBN 0-903409-85-2] p 29 A93-13408
- Airline training for advanced technology cockpits  
p 24 A93-13411
- Industrial design influence on today's flight decks  
p 61 A93-14378



- Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft p 45 A93-15175
- The 'artful' decision maker - A framework model for aeronautical decision making p 56 A93-15662
- Recent developments in U.S. Air Force pilot candidate selection and classification p 97 A93-18046
- Prospective assessment of stereoscopic visual status and USAF pilot training attrition p 116 A93-24039
- Individual pilot differences related to situation awareness p 175 A93-27137
- Insights into pilot situation awareness using verbal protocol analysis p 175 A93-27138
- The development and use of a generic nonnormal checklist with applications in ab initio and Introductory Advanced Qualification Programs p 180 A93-27456
- Altitude stress and cosmonaut training p 262 A93-35235
- Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249
- Visual cues in low-level flight - Implications for pilotage, training, simulation, and enhanced/synthetic vision systems p 264 A93-35918
- A study of decision making and performance in rejected takeoffs [SAE PAPER 921134] p 287 A93-41322
- Manned Space-Laboratories Control Centre (MSCC) training p 339 A93-43330
- Ab initio pilot training process more efficient than traditional methods p 387 A93-49276
- Future military pilot training - A perspective of industry [AIAA PAPER 93-3601] p 404 A93-52689
- Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694
- In-simulator assessment of trade-offs arising from mixture of color cuing and monocular, binoptic, and stereopsis cuing information p 407 A93-52916
- An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 N93-12509
- Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary p 99 N93-16189
- Automatic information processing and high performance skills [AD-A258473] p 132 N93-18273
- The unique contribution of selected personality tests to the prediction of success in naval pilot training [AD-A258144] p 132 N93-18291
- The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704
- Attention factors associated with head-up display and helmet-mounted display systems [AD-A260204] p 235 N93-24001
- Predicting aircrew training performance with psychometric g [AD-A264021] p 340 N93-30026
- Helicopter simulation: An aircrew training and qualification perspective p 342 N93-30676
- Training effectiveness assessment: Where are we? p 342 N93-30679
- Current training: Where are we? p 342 N93-30680
- Training effectiveness assessment: Methodological problems and issues p 342 N93-30684
- Background and objectives of the PARAT program p 343 N93-31230
- Mandatory multi-engined training syllabus [CAP-601] p 363 N93-31729
- PILOTS (PERSONNEL)**
- Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166
- Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707
- Tobacco and health of the pilot [ETN-93-93693] p 217 N93-23414
- PINEAL GLAND**
- Melatonin in human preovulatory follicular fluid p 215 A93-32474
- Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030
- The pineal gland - Its possible roles in human reproduction p 204 A93-33036
- The Gordon Research Conference on Pineal Cell Biology [AD-A264840] p 337 N93-30904
- Melatonin, the pineal gland, and circadian rhythms [AD-A264099] p 337 N93-31061
- PITCH (INCLINATION)**
- Influence of gravito-inertial force level on vestibular and visual velocity storage in yaw and pitch p 165 A93-28701
- PITUITARY GLAND**
- The pituitary - Aging and spaceflown rats p 79 A93-20661
- Heterogeneity of rat pituitary prolactin cells - Relationships among location, hormone assay and estrous cycle stage p 358 A93-46606
- Electrophoretic separation of cells and particles from rat pituitary and rat spleen [NASA-CR-193073] p 276 N93-28415
- PITUITARY HORMONES**
- The pituitary - Aging and spaceflown rats p 79 A93-20661
- Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933
- Heterogeneity of rat pituitary prolactin cells - Relationships among location, hormone assay and estrous cycle stage p 358 A93-46606
- Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619
- Endocrinology of space/motion sickness p 403 A93-55935
- Electrophoretic separation of cells and particles from rat pituitary and rat spleen [NASA-CR-193073] p 276 N93-28415
- PLANETARY ATMOSPHERES**
- The violent environment of the origin of life - Progress and uncertainties p 412 A93-53292
- PLANETARY BASES**
- K.E. Tsiolkovsky on the problem of human survival in extreme environments (On the earth and in space) p 77 A93-18407
- Mars habitat p 352 N93-29747
- PLANETARY COMPOSITION**
- Mars: A reassessment of its interest to biology p 113 N93-18550
- Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 N93-18551
- PLANETARY ENVIRONMENTS**
- Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 N93-18551
- PLANETARY EVOLUTION**
- Comets and the formation of biochemical compounds on the primitive earth - A review p 109 A93-17977
- The fate or organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite p 110 A93-17984
- Mars: A reassessment of its interest to biology p 113 N93-18550
- Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 N93-18551
- PLANETARY QUARANTINE**
- Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408
- PLANETARY SYSTEMS**
- The solar system: Importance of research to the biological sciences p 113 N93-18547
- PLANKTON**
- Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388
- Biofilm ecology of bioluminescent bacteria [AD-A255282] p 42 N93-14532
- PLANNING**
- Overconfidence, preview, and probability in strategic planning p 179 A93-27195
- PLANT DESIGN**
- Ultraviolet disinfection technology assessment [PB92-222668] p 64 N93-12983
- PLANT DISEASES**
- Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 N93-10835
- PLANT ROOTS**
- A matrix-based porous tube water and nutrient delivery system [SAE PAPER 921390] p 309 A93-41548
- The Minirion system for growth of small plants under controlled environment conditions p 358 A93-46471
- Gravity and root morphogenesis p 210 N93-24403
- PLANTS (BOTANY)**
- Pharmacological effects of mixture of Eleutherococcus (ELE) and Elscholtzia (ELS) p 11 A93-13710
- Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715
- Biosphere 2 - Overview of system performance during the first nine months [SAE PAPER 921129] p 291 A93-41317
- Advanced life support systems in lunar and Martian environments utilizing a higher plant based engineering paradigm [SAE PAPER 921286] p 302 A93-41452
- Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921354] p 306 A93-41513
- Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design [SAE PAPER 921356] p 307 A93-41515
- Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization [SAE PAPER 921391] p 309 A93-41549
- An integrated human/plant metabolic mass balance model p 347 A93-42130
- Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness p 327 A93-44842
- Protective effects of Rhodiola crenulata on rats under antithrostatic position and professional athletes p 327 A93-44843
- Minirion II system for precise control of the plant growth environment p 357 A93-46470
- Centrifuges - Evolution of their uses in plant gravitational biology and new directions for research on the ground and in spaceflight p 376 A93-49211
- Resource capture by single leaves [DE92-015847] p 5 N93-10461
- Techniques for optimal crop selection in a controlled ecological life support system [NASA-TM-103950] p 33 N93-12018
- Scaling issues for biodiversity protection [DE92-016689] p 6 N93-12315
- Investigation of wheat coleoptile response to phototropic stimulations [NASA-CR-192157] p 114 N93-18608
- Development of Arabidopsis thaliana grown under microgravity conditions p 211 N93-24404
- PLASMA CORE REACTORS**
- Plasma reactor waste management systems p 68 N93-14000
- PLASTIC MEMORY**
- Theory of synaptic plasticity in visual cortex [AD-A260052] p 224 N93-23960
- PLASTIC PROPERTIES**
- Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238
- PLATELETS**
- Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 N93-29620
- POINTING CONTROL SYSTEMS**
- Eye slaved pointing system for teleoperator control p 101 A93-19090
- POLAR REGIONS**
- Biomedical Polar Research Workshop Minutes [NASA-TM-108026] p 81 N93-16799
- POLARIZATION (CHARGE SEPARATION)**
- Primary charge separation in isolated photosystem 2 reaction centers [DE92-041128] p 82 N93-17189
- POLICIES**
- Health effects of low-frequency electric and magnetic fields [DE93-005675] p 127 N93-19838
- POLIOMYELITIS**
- Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304
- POLITICS**
- Organizational politics, participation in decision-making, and job satisfaction [DOT/FAA/AM-92/17] p 257 N93-25203
- POLLUTION CONTROL**
- Format and structure of a database on health and environmental impacts of different energy systems for electricity generation [DE92-634160] p 12 N93-10222
- Space life support technology applications to terrestrial environmental problems p 265 N93-25617
- POLLUTION MONITORING**
- The role of Environmental Health System air quality monitors in Space Station Contingency Operations [SAE PAPER 921414] p 310 A93-41565
- Monitoring human tissues for toxic substances [PB92-223239] p 173 N93-21498
- POLLUTION TRANSPORT**
- Application of RADTRAN to estimation of doses to persons in enclosed spaces [DE93-000758] p 97 N93-17230
- POLYMERS**
- Dark matter in the solar system - Hydrogen cyanide polymers p 110 A93-17987
- POLYTETRAFLUOROETHYLENE**
- Space habitat contaminant growth models. II p 345 A93-42094
- POPULATION THEORY**
- Individual differences and subgroups within populations - The shopping bag approach p 136 A93-24050

## POPULATIONS

- Human perceptual deficits as factors in computer interface test and evaluation  
[DE92-019124] p 63 N93-12712

## POROSITY

- Development of physical and mathematical models for the Porous Ceramic Tube Plant Nitrification System (PCTPNS)  
[NASA-TM-107551] p 4 N93-10085

## PORPHYRINS

- Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing  
[DE93-006411] p 210 N93-24028

## PORTABLE EQUIPMENT

- X Ray System, Lightweight Medical (XRSLM)  
[AD-A258159] p 123 N93-18295  
Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243

## PORTABLE LIFE SUPPORT SYSTEMS

- Comparison of portable crewmember protective breathing equipment (CPBE) designs  
[DOT/FAA/AM-93/6] p 310 N93-27121  
Evolution of Space Station EMU PLSS technology recommendations p 312 N93-27790

## POSITION (LOCATION)

- The locator system for wandering individuals  
[NASA-TM-104754] p 31 N93-11649  
Eye movements and visual information processing  
[AD-A259955] p 225 N93-24297

## POSITION ERRORS

- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system  
[NASA-CR-185689] p 34 N93-12211

## POSITRONS

- Cognition in the brain: Investigations using positron emission tomography  
[AD-A254280] p 14 N93-10765  
New techniques for positron emission tomography in the study of human neurological disorders  
[DE92-015353] p 23 N93-11873  
Non-invasive evaluation of the cardiac autonomic nervous system by PET  
[DE92-041077] p 96 N93-16441

## POSTFLIGHT ANALYSIS

- The cardiovascular system p 46 A93-15530

## POSTURE

- Influence of posture and prolonged head-down tilt on cardiovascular reflexes p 161 A93-28677  
Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750  
Human-like agents with posture planning ability p 192 A93-29118  
Visual and somesthetic influences on postural orientation in the median plane p 224 A93-32782  
Postural stabilization on a moving platform oscillating at high frequencies p 252 A93-35497  
Adaptation to transient postural perturbations  
[NASA-CR-190959] p 105 N93-16699  
Role of orientation reference selection in motion sickness  
[NASA-CR-191912] p 124 N93-18596  
Transmission of vibration through the human body to the head: A summary of experimental data  
[ISVR-TR-218] p 361 N93-32237

## POTABLE WATER

- Phase III Integrated Water Recovery Testing at MSFC - Closed hygiene and potable loop test results and lesson learned  
[SAE PAPER 921117] p 290 A93-41309  
Process Control Water Quality Monitor for Space Station Freedom - Development update  
[SAE PAPER 921264] p 299 A93-41434  
Continuous monitoring of effluent iodine levels of Space Station water using solid state technology  
[SAE PAPER 921265] p 299 A93-41435  
Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water  
[SAE PAPER 921268] p 300 A93-41438  
Use of sorption technology for treatment of humidity condensate for potable water  
[SAE PAPER 921312] p 303 A93-41474  
Regenerable Microbial Check Valve - Life cycle tests results  
[SAE PAPER 921316] p 303 A93-41478  
Recovering potable water from wastewater in space platforms by lyophilization  
[SAE PAPER 921323] p 304 A93-41485  
Generation of iodine disinfection by-products (IDP's) in a water recycle system  
[SAE PAPER 921362] p 307 A93-41521  
Extraction of potable water from urine for space applications p 345 A93-42121

## Methods development for total organic carbon

- accountability  
[NASA-CR-184438] p 40 N93-12949  
Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] p 112 N93-18351  
Regenerable biocide delivery unit, volume 1  
[NASA-CR-185701-VOL-1] p 274 N93-27122  
Utilization of high energy electron beam in the treatment of drinking and waste water  
[DE92-642335] p 372 N93-32406

## POTATOES

- Crop growth and associated life support for a lunar farm p 67 N93-13994  
Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997

## POTENTIAL ENERGY

- Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A264829] p 336 N93-30613

## POWER AMPLIFIERS

- Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier p 65 N93-13486

## POWER LINES

- Potential human health effects associated with power frequency electric and magnetic fields  
[PB93-132678] p 221 N93-24590

## POWER SUPPLY CIRCUITS

- Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)  
[AD-A253394] p 30 N93-10288

## POWERED LIFT AIRCRAFT

- Design of a portable powered seat lift p 195 N93-22190

## PREDICTION ANALYSIS TECHNIQUES

- Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H  
[AD-A254939] p 63 N93-12545  
The unique contribution of selected personality tests to the prediction of success in naval pilot training  
[AD-A258144] p 132 N93-18291  
Target fragmentation in radiobiology  
[NASA-TM-4408] p 124 N93-18381

## PREDICTIONS

- Comparative assessment of psychomotor performance - Target prediction by humans and macaques (Macaca mulatta) p 204 A93-33035  
Operator workload predictions for the revised AH-64A workload prediction model, volume 1  
[AD-A254198] p 30 N93-10261  
Microcomputer based software for biodynamic simulation p 196 N93-22191  
Contribution of personality to the prediction of success in initial air traffic control specialist training  
[DOT/FAA/AM-93/4] p 259 N93-26138

## PREFLIGHT OPERATIONS

- Cockpit checklists - Concepts, design, and use p 389 A93-52506  
Candidate technologies for the Integrated Health Management Program  
[NASA-CR-192520] p 217 N93-22655

## PRELAUNCH TESTS

- Candidate technologies for the Integrated Health Management Program  
[NASA-CR-192520] p 217 N93-22655

## PREPARATION

- Phases of the project development and examination methodologies p 343 N93-31231  
The PARAT tests as examination system p 344 N93-31238

## PRESSURE BREATHING

- Control of breathing under conditions of altered atmospheric density during muscular work p 89 A93-18288  
The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys p 75 A93-18289  
Maximal lung ventilation and forced expiration rate under hyperbaria p 76 A93-18297  
Parameters of external breathing in an excess-pressure atmosphere p 76 A93-18298  
Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167

## PRESSURE CHAMBERS

- Lower body negative pressure system for simulation of +Gz-induced physiological strain p 119 A93-25210  
The problem of oxygen regimen in extreme conditions p 160 A93-27685  
Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package  
[SAE PAPER 921122] p 291 A93-41314  
Effect of hypoxic hypoxia on the immune response and some factors of nonspecific resistance of human and animal organisms p 325 A93-43074

- Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model p 245 N93-26069

## PRESSURE EFFECTS

- Model building, algorithm and simulation of the pressure control system of a cabin p 29 A93-13534  
Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672  
The effects of a reduced pressure scenario on the Columbus APM environmental control system  
[SAE PAPER 921247] p 298 A93-41418  
Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures  
[AD-A264179] p 336 N93-30882

## PRESSURE MEASUREMENT

- Direct measurement of capillary blood pressure in the human lip p 279 A93-40550  
Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package  
[SAE PAPER 921354] p 306 A93-41513  
Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design  
[SAE PAPER 921356] p 307 A93-41515

## PRESSURE OSCILLATIONS

- The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257

## PRESSURE REDUCTION

- Human factors in design of military aircrafts' oxygen supply equipment p 60 A93-14222  
Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410  
Complement proteins and decompression sickness susceptibility  
[AD-A254448] p 50 N93-12905  
Statistically based decompression tables. 7: Selection and treatment of primary air and N2O2 data  
[AD-A259090] p 172 N93-20587  
Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398  
Hyperbaric treatment p 360 N93-31454

## PRESSURE REGULATORS

- For space suits - The multifunction pressure reducer-regulator of Intertechnique p 61 A93-15057

## PRESSURE SENSORS

- Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements  
[SAE PAPER 921347] p 305 A93-41506  
Power assist EVA glove development p 314 N93-27850

## PRESSURE SUITS

- Potential hazards of high anti-Gz suit protection p 48 A93-16164  
Pressure suit requirements for moon and Mars EVA's p 346 A93-42123  
Lunar base pressure, O2 fraction, and ExtraHabitat Activity suit design p 346 A93-42125

## PRESSURE VESSELS

- High-recovery low-pressure reverse osmosis  
[SAE PAPER 921353] p 306 A93-41512

## PRESSURIZED CABINS

- Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture  
[SAE PAPER 921193] p 295 A93-41371  
Shuttle Orbiter Environmental Control and Life Support System - Flight experience  
[SAE PAPER 921348] p 305 A93-41507  
Lunar base pressure, O2 fraction, and ExtraHabitat Activity suit design p 346 A93-42125

## PRETREATMENT

- Mechanisms of the antihypoxic effect of taurine p 325 A93-43073  
Microbiological and corrosion analysis of three urine pretreatment regimes with titanium 6A1-4V  
[NASA-CR-192575] p 372 N93-32356

## PREVENTION

- Unconsciousness in flight and its prevention p 217 A93-32787  
The US Navy Healthy Back Program: Effect on back knowledge among recruits  
[AD-A258368] p 121 N93-18210  
Prevention of cumulative trauma disorders  
[PB93-188332] p 338 N93-31138

## PRIMARY COSMIC RAYS

- Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

## PRIMATES

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 [DE92-040153] p 41 N93-13503
- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates [DE93-007678] p 211 N93-24455

## PRIMITIVE EARTH ATMOSPHERE

- An experimental approach to chemical evolution in submarine hydrothermal systems p 74 A93-18008

## PRINCIPAL COMPONENTS ANALYSIS

- The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training [AD-A258025] p 131 N93-17919
- The five-factor personality model and naval aviation candidates [AD-A260227] p 225 N93-24319

## PROBABILITY THEORY

- Radiation damage to DNA [DE92-015760] p 5 N93-10834
- Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707
- Statistically based decompression tables. 7: Selection and treatment of primary air and N2O2 data [AD-A259090] p 172 N93-20587
- Quantification of human responses p 340 N93-29564

- Probabilistic simulation of the human factor in structural reliability p 365 N93-31573

## PROBLEM SOLVING

- Graphical displays - Implications for divided attention, focused attention, and problem solving p 102 A93-19984
- Human-computer cooperative problem solving in satellite ground control p 188 A93-27163
- Ontology of mind, subjective ontology, and the example of temporal expressions [REPT-92-018] p 26 N93-11212
- How expert pilots think: Cognitive processes in expert decision making [DOT/FAA/RD-93/9] p 288 N93-27103

## PROCEDURES

- CATS EYES adjustment procedures [AD-A264069] p 353 N93-29924

## PRODUCT DEVELOPMENT

- User areas in aircraft cockpit, using methods of rapid prototype development [MBB-FE-315-S-PUB-0493] p 196 N93-22389

## PRODUCTION ENGINEERING

- Oxygen production on the Lunar materials processing frontier p 315 N93-27967

## PRODUCTION MANAGEMENT

- Annual report [NASA-CR-191389] p 105 N93-16840

## PRODUCTIVITY

- Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997

## PROGRAM VERIFICATION (COMPUTERS)

- Intelligent fault management for the Space Station active thermal control system p 32 N93-11930

## PROGRAMMING

- Human performance assessment methods [AGARD-AG-308-ADD] p 133 N93-18868

## PROJECT MANAGEMENT

- Computer-supported collaborative work - A new agenda for human factors engineering p 348 A93-42841
- Advanced cockpit-mission and image management p 144 N93-19760
- The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769

## PROJECT PLANNING

- Space radiation health program plan [NASA-TM-108036] p 123 N93-18375
- Cardiopulmonary discipline science plan [NASA-TM-108040] p 125 N93-19648
- Neuroscience discipline science plan [NASA-TM-108041] p 128 N93-19882
- Regulatory physiology discipline science plan [NASA-TM-108038] p 115 N93-19891
- Musculoskeletal discipline science plan [NASA-TM-108039] p 128 N93-19892
- Study on environment control and life support technology p 149 N93-20413

## PROJECT SETI

- Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 N93-15825
- Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191807] p 110 N93-16709
- SETI in Europe p 237 N93-23908
- Space biology research development [NASA-CR-192830] p 244 N93-25242

- Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-193137] p 322 N93-28895

## PROJECTION

- Large-screen-projection, avionic, and helmet-mounted displays; Proceedings of the Meeting, San Jose, CA, Feb. 26-28, 1991 [SPIE-1456] p 181 A93-26881

## PROKARYOTES

- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 37 A93-14121
- DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580
- Regulation of alternative CO2 fixation pathways in prokaryotic and eucaryotic photosynthetic organisms [DE93-012109] p 276 N93-29181

## PROMETHAZINE

- Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 A93-30283
- Pharmacological countermeasures against motion sickness p 404 A93-55945

## PROPHYLAXIS

- The efficiency of a prophylactic-rehabilitational treatment of civil-aviation flight crews p 91 A93-18415
- Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 N93-11307

## PROPRIOCEPTION

- Alterations of proprioceptive function in the weightless environment p 86 A93-17549
- Visual and somesthetic influences on postural orientation in the median plane p 224 A93-32782
- The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219
- Space motion sickness monitoring experiment - Spacelab I p 403 A93-55941

## PROSTAGLANDINS

- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728
- Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 N93-24763
- Mechanical stimulation of skeletal muscle increases prostaglandin F2(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism [NASA-CR-193041] p 282 N93-27102

## PROSTHETIC DEVICES

- Design of a reading test for low vision image warping p 400 A93-53025
- Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 N93-14870
- Control system and method for prosthetic devices [NASA-CASE-MSC-21941-1] p 106 N93-17087
- Finite element analysis of a composite artificial ankle p 174 N93-22189
- The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569
- Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085
- Prosthetic elbow joint [NASA-CASE-MFS-28707-1] p 354 N93-30566

## PROTEASE

- Some proteins keep 'living fossil' pre-sequence p 244 A93-36562

## PROTECTION

- Upper interior head protection. Volume 1. The development of a research test procedure [PB93-113769] p 194 N93-21537
- Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 N93-21795
- Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979

## PROTECTIVE CLOTHING

- Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330
- Thermal convergence fails to predict heat tolerance limits p 8 A93-10331
- A new protective breathing apparatus p 29 A93-13535
- Heat stress in protective clothing - Validation of a computer model and the Heat-Humidity Index (HHI) p 88 A93-18040
- The physiological consequences of simulated helicopter flight in NBC protective equipment p 117 A93-24049
- Effects of error-proofing and chemical/biological/radiation protective glove use on touch panel operation p 186 A93-27152
- Effects of fatigue and heat stress on vigilance of workers in protective clothing p 177 A93-27173

- The effect of wearing protective chemical warfare combat clothing on human performance p 230 A93-30287

- Glovebox design for Space Station Freedom Crew Health Care System [SAE PAPER 921139] p 292 A93-41326

- The Centrifuge Facility Life Sciences Glovebox configuration study [SAE PAPER 921158] p 293 A93-41341

- Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems [SAE PAPER 921258] p 299 A93-41428

- Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49218

- Continuous vs. intermittent work with Canadian forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49219

- Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) [AD-A253393] p 30 N93-10217

- Evaluation of multilayer mask concept for RESPO 21 [AD-A253392] p 33 N93-12079

- Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 N93-12145

- Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia [AD-A255120] p 34 N93-12291

- The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 N93-12491

- Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 N93-12960

- Physiological stress from chemical defense clothing and equipment [AD-A255786] p 51 N93-14028

- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 369) [NASA-SP-7011(369)] p 53 N93-14731

- Protective helmet assembly [NASA-CASE-MSC-21842-1] p 106 N93-17088

- Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161

- Evaluation of two microclimate cooling air vests on a heated mannequin [AD-A259410] p 194 N93-21269

- Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 N93-23995

- An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128

- Lightweight passive microclimate cooling device [AD-A262262] p 317 N93-28112

- Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757

- Evaluation and optimization of a flexible filtration system for respiratory protection system 21 [AD-A262467] p 284 N93-28758

- Biophysical model for handwear insulation testing [AD-A262926] p 320 N93-28884

- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 N93-29471

- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377) [NASA-SP-7011(377)] p 361 N93-31924

## PROTECTIVE COATINGS

- Studies of a laser/nuclear thermal hardened body armor [AD-A255128] p 34 N93-12423

- Biofilm ecology of bioluminescent bacteria [AD-A255282] p 42 N93-14532

## PROTECTORS

- Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21) [AD-A253394] p 30 N93-10288

## PROTEIN CRYSTAL GROWTH

- Studies towards the crystallization of the rod visual pigment rhodopsin p 1 A93-11150
- Atomic structure and chemistry of human serum albumin p 200 A93-31628

- Effects of a microgravity environment on the crystallization of biological macromolecules p 357 A93-45995

**PROTEIN METABOLISM**

- Protein absorption and energy digestibility at high altitude p 115 A93-21683
- Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage p 111 A93-23074
- Differential effects of insulin resistance on leucine and glucose kinetics in obesity p 152 A93-27224
- Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188
- Mechanically induced alterations in cultured skeletal muscle growth p 202 A93-32749
- Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029
- Response of a mouse hybridoma cell line to heat shock, agitation, and sparging p 328 A93-44928

**PROTEIN SYNTHESIS**

- Experimental studies on the origin of the genetic code and the process of protein synthesis - A review update p 73 A93-17822
- Intracellular proteins produced by mammalian cells in response to environmental stress p 328 A93-44929
- Effect of spaceflight on human protein metabolism p 360 A93-47097
- Relationship between G + C in silent sites of codons and amino acid composition of human proteins p 358 A93-47099
- Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 A93-24763
- Mechanical stimulation of skeletal muscle increases prostaglandin F<sub>2</sub>(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism [NASA-CR-193041] p 282 A93-27102

**PROTEINOIDS**

- Flavine-dependent processes in model prebiological systems p 372 A93-47125

**PROTEINS**

- Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity p 1 A93-11199
- Immune response during space flight p 94 A93-20664
- A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918
- Protein composition of the blood plasma of cosmonauts after lengthy orbital flights p 249 A93-35243
- Roles of water molecules in bacteria and viruses p 243 A93-36555
- Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557
- Some proteins keep 'living fossil' pre-sequence p 244 A93-36562
- In vitro selection of optimal DNA substrates for T4 RNA ligase p 329 A93-44939
- Salivary total protein and experimental Coriolis sickness p 383 A93-49573
- Nerves and tissue repair [AD-A255299] p 53 A93-14535
- Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A256340] p 55 A93-15198
- The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins [DE93-002940] p 115 A93-19751
- Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 A93-20384
- Biochemically active layers for selective material detection sensors [MBB-Z-0440-92-PUB] p 158 A93-20959
- Primary events in olfactory reception [AD-A260562] p 255 A93-25944
- Pseudomonas screening assay [NASA-CASE-NPO-17653-1-CU] p 245 A93-25994
- Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 A93-27989
- Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 A93-28199
- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 A93-28293
- Center of Excellence in Biotechnology (Research) [AD-A263598] p 330 A93-29915
- PROTOCOL (COMPUTERS)**
- Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 A93-13327

- Principles for integrating voice I/O in a complex interface p 146 A93-19774

**PROTON IRRADIATION**

- Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223
- Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408
- Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 A93-26259

**PROTOPLASTS**

- The USO-concept applied to a biological model experiment p 210 A93-24379

**PROTOTYPES**

- Agent-based pilot-vehicle interfaces - Concept and prototype p 262 A93-34986
- Sabatier carbon dioxide reduction system for Space Station Freedom [SAE PAPER 921189] p 294 A93-41368
- Development of a test protocol for evaluating EVA glove performance [SAE PAPER 921254] p 298 A93-41424
- Life systems for a lunar base p 66 A93-13992
- Development of a prototype interactive learning system using multi-media technology for mission independent training program p 100 A93-17310
- Design of a portable powered seat lift p 195 A93-22190
- Microcomputer based software for biodynamic simulation p 196 A93-22191
- User areas in aircraft cockpit, using methods of rapid prototype development [MBB-FE-315-S-PUB-0493] p 196 A93-22389
- Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 A93-23082

**PROTOZOA**

- Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548
- Swimming behavior of the unicellular flagellate, Euglena gracilis, in simulated and real microgravity p 151 A93-26549
- Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248
- Process for selectively recovering algae and protozoa [NASA-CASE-MFS-26124-1-NPO] p 276 A93-29174

**PROXIMITY**

- Real time proximity cues for teleoperation using model based force reflection p 184 A93-27033

**PSEUDOMONAS**

- Aquatic biofilms and their responses to disinfection and invading species [SAE PAPER 921211] p 296 A93-41387
- Pseudomonas screening assay [NASA-CASE-NPO-17653-1-CU] p 245 A93-25994

**PSYCHIATRY**

- Contribution of psychiatry to life in space p 56 A93-15529

**PSYCHOLOGICAL EFFECTS**

- Psychiatric diagnoses aboard an aircraft carrier p 57 A93-16162
- Psychophysiological factors which impair the professional reliability of a pilot in emergency situations p 129 A93-23150
- Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel p 257 A93-36744
- Performance and mood-state parameters during 30-day 6 deg head-down bed rest with exercise training p 281 A93-41169
- The psychological effects of isolation on a space station - A simulation study [SAE PAPER 921191] p 287 A93-41369
- Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115

**PSYCHOLOGICAL FACTORS**

- Crew factors --- and their psychological problems in long term space flight p 57 A93-17431
- Overconfidence, preview, and probability in strategic planning p 179 A93-27195
- Things that go bump in the light - On the optical specification of contact severity p 256 A93-35099
- Lunar habitats - Places for people p 344 A93-41991
- Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments p 99 A93-16801
- Effectiveness of birthdate biorhythm theory on flight accidents p 127 A93-19710
- Instructions and advance training measures for the improvement of human reliability [MBB-FE-313-S-PUB-0500] p 181 A93-21402

- Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 A93-28757

- Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 A93-29406

- Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force p 369 A93-32255

**PSYCHOLOGICAL TESTS**

- A software for testing human's ability to trouble-shoot in the condition of multitask p 29 A93-13537
- Spectral analysis of visual symbols p 30 A93-13718
- Comparing the Cattell 16PF profiles of male and female commercial airline pilots p 178 A93-27177
- 'Screening-Controlling' Psychological Selection System for Air Force pilot cadet p 222 A93-30440
- Neurobehavioral test in civil aviation flight personnel p 223 A93-30443
- Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780
- Structured interviews for pilot selection - No incremental validity p 286 A93-39572
- Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713
- The psychological challenge of space p 339 A93-42658

- Recommendations for mental workload measurement in a test and evaluation environment p 394 A93-52504

- Visual perception of structure from motion [AD-A253235] p 26 A93-11503

- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables [AD-A254681] p 27 A93-12225

- Comparing performance on implicit memory tests [AD-A258168] p 131 A93-17921

- Using constraint satisfaction networks to study aircrew selection for advanced cockpits [AD-A258151] p 140 A93-18293

- Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 A93-23995

- Spontaneous discovery and use of categorical structure [AD-A261658] p 260 A93-26364

- Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 A93-26521

- Pilot Candidate Selection Method (PCSM): What makes it work? [AD-A262871] p 340 A93-29481

- Field test of a computer-driven tool to measure psychological characteristics of aircrew [AD-A264484] p 341 A93-30425

- Computer-generated parallel tests for aptitude measurement in the selection of aviation operators [DLR-FB-92-29] p 343 A93-31229

- Background and objectives of the PARAT program p 343 A93-31230

- Phases of the project development and examination methodologies p 343 A93-31231

- The position test: A computer generated process for acquisition of inductive logic thinking p 343 A93-31232

- The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 A93-31233

- The clearance test: A computer generated process for acquisition of auditory short term sensitivity p 343 A93-31234

- The concentration loading test system: A computer generated process for acquisition of attentiveness control p 344 A93-31235

- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 A93-31236

- The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 A93-31237

- The PARAT tests as examination system p 344 A93-31238

- PSYCHOLOGY**
- Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System p 202 A93-32651

- The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 A93-19704

- Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 A93-19709
- The central executive component of working memory [AD-A258724] p 135 A93-20326

- Neuropsychological components of object identification  
[AD-A261449] p 259 N93-26347
- The dynamics of visual representation, attention, encoding, and retrieval processes  
[AD-A264674] p 342 N93-30543
- PSYCHOMETRICS**
- Human speed perception is contrast dependent  
p 55 A93-14119
- The 'artful' decision maker - A framework model for aeronautical decision making  
p 56 A93-15662
- A comparison of two scoring procedures with the NASA task load index in a simulated flight task  
p 349 A93-42849
- Recommendations for mental workload measurement in a test and evaluation environment  
p 394 A93-52504
- Space and cognition - The measurement of behavioral functions during a 6-day space mission  
p 405 A93-55164
- A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity  
[AD-A255926] p 52 N93-14109
- A computer-based visual analog scale  
[AD-A258152] p 122 N93-18280
- Human performance assessment methods  
[AGARD-AG-308-ADD] p 133 N93-18868
- International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection  
[DLR-FB-92-12] p 225 N93-24104
- Predicting aircrew training performance with psychometric g  
[AD-A264021] p 340 N93-30026
- Field test of a computer-driven tool to measure psychological characteristics of aircrew  
[AD-A264484] p 341 N93-30425
- Computer-generated parallel tests for aptitude measurement in the selection of aviation operators  
[DLR-FB-92-29] p 343 N93-31229
- The position test: A computer generated process for acquisition of inductive logic thinking  
p 343 N93-31232
- The test memorization of symbols and numbers: A computer generated test for visual sensitivity  
p 343 N93-31233
- The clearance test: A computer generated process for acquisition of auditory short term sensitivity  
p 343 N93-31234
- The concentration loading test system: A computer generated process for acquisition of attentiveness control  
p 344 N93-31235
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability  
p 344 N93-31236
- The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability  
p 344 N93-31237
- PSYCHOMOTOR PERFORMANCE**
- Locus of the single-channel bottleneck in dual-task interference  
p 55 A93-14098
- Short-term retest reliability of an experimental U.S. Air Force pilot candidate selection test battery  
p 56 A93-15661
- The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys  
p 75 A93-18289
- Motor activity of animals under elevated pressure  
p 75 A93-18290
- Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance  
p 117 A93-24042
- The effect of G-LOC on psychomotor performance and behavior  
p 130 A93-25205
- COGIMIR - A study of cognitive functions in microgravity  
p 174 A93-26569
- Performance differences in psychomotor and dichotic listening tests among landing craft air cushion vehicle operator trainees  
p 177 A93-27174
- Rated performance, cardiovascular and quantitative EEG parameters during simulated instrument flight under the effect of terfenadine  
p 165 A93-28708
- Predicting individual differences in complex skill acquisition - Dynamics of ability determinants  
p 181 A93-28731
- Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture  
p 169 A93-28750
- Identification of a critical period for motor development in neonatal rats  
p 157 A93-28764
- Comparative assessment of psychomotor performance - Target prediction by humans and macaques (Macaca mulatta)  
p 204 A93-33035
- Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301)  
p 277 A93-39704
- Behavioral asymmetries of psychomotor performance in rhesus monkeys (Macaca mulatta) - A dissociation between hand preference and skill  
p 339 A93-44923
- The effects of Benadryl and Hismanal on mood, physiological measures, antihistamine detection, and subjective symptoms  
p 385 A93-52302
- The effects of Benadryl and Hismanal on psychomotor performance and perceived performance  
p 385 A93-52303
- Human factors with nonhumans - Factors that affect computer-task performance  
p 404 A93-52721
- Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots  
p 401 A93-55163
- Psychophysiological study on the effects of co-existence of lines for detecting dot target  
p 405 A93-55330
- Publications of the Space Physiology and Countermeasures Program, Neuroscience Discipline: 1980-1990  
[NASA-CR-4476] p 55 N93-15583
- Proceedings of Workshop 1: The Human Brainmap Database  
[AD-A260720] p 258 N93-25654
- PSYCHOPHARMACOLOGY**
- Dopamine release in rat striatum - Physiological coupling to tyrosine supply  
p 152 A93-27050
- Pharmacological defense of the brain during radiation damage - Some arguments  
p 240 A93-35217
- The effects of Benadryl and Hismanal on mood, physiological measures, antihistamine detection, and subjective symptoms  
p 385 A93-52302
- Neurochemistry and pharmacology of motion sickness in nonhuman species  
p 399 A93-55934
- Pharmacological countermeasures against motion sickness  
p 404 A93-55945
- Analysis of neural systems involved in modulation of memory storage  
[AD-A262418] p 283 N93-27654
- PSYCHOPHYSICS**
- Visual psychophysics of egomotion  
[AD-A248349] p 26 N93-11488
- Psychophysical analyses of perceptual representations  
[AD-A255432] p 58 N93-14510
- Higher order mechanisms of color vision  
[AD-A256369] p 60 N93-15329
- High-resolution contrast control on a video display: Method and calibration  
[AD-A256552] p 60 N93-15400
- Spatio-temporal masking: Hyperacuity and local adaptation  
[AD-A257934] p 121 N93-18006
- Decision paths in complex tasks  
[NASA-CR-192121] p 132 N93-18359
- PSYCHOPHYSIOLOGY**
- Vision modelling applications for display optimisation  
p 29 A93-13414
- Psychophysiological studies of acute hypoxic hypoxia  
p 91 A93-18417
- Psychophysiological factors which impair the professional reliability of a pilot in emergency situations  
p 129 A93-23150
- Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size  
p 224 A93-32788
- Psychophysiological principles of flight training for actions in nonroutine situations  
p 256 A93-35233
- Altitude stress and cosmonaut training  
p 262 A93-35235
- Psychosomatic status and flying skill during geomagnetic disturbances  
p 257 A93-35251
- Identification of hazardous awareness states in monitoring environments  
[SAE PAPER 921136] p 287 A93-41324
- Investigation of individual and typological features of an operator's nervous system under different work regimes  
p 339 A93-43024
- A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object  
p 364 A93-45685
- Dynamics of electroencephalographic indices during acute hypoxia  
p 402 A93-55333
- Perception of lightness and brightness in complex patterns  
[AD-A254093] p 25 N93-10658
- Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function  
p 18 N93-11299
- The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB  
[AD-A254840] p 27 N93-12432
- Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness  
[AD-A255485] p 54 N93-14789
- Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus  
p 127 N93-19707
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-025] p 244 N93-25405
- Comparative analytical study of evoked and event related potentials as correlates of cognitive processes  
[AD-A261388] p 261 N93-26446
- Theory of signal detection and its application to visual target acquisition: A review of the literature  
[AD-A262920] p 288 N93-28307
- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011
- PSYCHOSOMATICS**
- The asthenic syndrome and the dynamics of mental-work capacity  
p 256 A93-35241
- Psychosomatic status and flying skill during geomagnetic disturbances  
p 257 A93-35251
- Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel  
p 257 A93-36744
- PSYCHOTROPIC DRUGS**
- Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress  
p 253 A93-36745
- Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots  
p 401 A93-55163
- PUBLIC HEALTH**
- K.E. Tsiolkovsky on individual time perception and some characteristics of intuitive perception of the properties of time at different levels of motor activity and health  
p 98 A93-18413
- Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222
- Vaccination against Hepatitis B: The Italian strategy  
p 15 N93-11289
- Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption  
[AD-A250648] p 23 N93-11893
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-024] p 40 N93-13033
- Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products  
[AD-A255224] p 51 N93-13941
- Prologue to Action. Life Sciences Education and Science Literacy  
[PB93-107514] p 159 N93-21230
- Monitoring human tissues for toxic substances  
[PB92-223239] p 173 N93-21498
- PULMONARY CIRCULATION**
- Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m  
p 280 A93-41121
- Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude  
p 326 A93-44181
- Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes  
p 383 A93-49574
- Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin  
[AD-A258185] p 120 N93-17900
- PULMONARY FUNCTIONS**
- Potential hazards of high anti-Gz suit protection  
p 48 A93-16164
- Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest  
p 162 A93-28682
- Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide  
p 271 A93-39707
- Response of genioglossus EMG activity to passive tilt in men  
p 279 A93-41118
- Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m  
p 280 A93-41120
- Effect of chronic hypoxia on hypoxic ventilatory response in awake rats  
p 323 A93-42187
- Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise  
p 331 A93-42188
- Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge  
p 379 A93-49178
- Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes  
p 383 A93-49574
- Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity  
p 386 A93-52617

- Asthma in aircrew: Assessment, treatment and disposition p 21 N93-11315  
 Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318  
 Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990  
 [NASA-CR-4475] p 123 N93-18376  
 Cardiopulmonary discipline science plan  
 [NASA-TM-108040] p 125 N93-19648  
 The chronic effects of jP-8 jet fuel exposure on the lungs  
 [AD-A264162] p 334 N93-30153

**PULMONARY LESIONS**

- Potential health hazards from thermal degradation events - Particulate vs. gas phase effects  
 [SAE PAPER 921388] p 282 A93-41546  
 Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186

**PUPILS**

- A tutorial on exit pupils and eye rotation with virtual image optical displays  
 [AD-A262399] p 333 N93-29400

**PURIFICATION**

- Purification and properties of an ATPase from *Sulfolobus solfataricus* p 201 A93-32115

**PYRENES**

- The origin of the polycyclic aromatic hydrocarbons in meteorites p 110 A93-17983

**PYRIDOXINE**

- The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068

**PYROLYSIS**

- Pyrolysis of vegetation by brief intense irradiation p 324 A93-42915  
 Toxicological investigations of flight accidents: Findings and methods p 126 N93-19695  
 The acute inhalation toxicity of pyrolysis products of halon 1301  
 [AD-A260874] p 254 N93-25629  
 Development of a pyrolysis waste recovery model with designs, test plans, and applications for space-based habitats p 267 N93-26076

**PYROLES**

- Linear tetrapyrroles (phycobilins) in a model prebiological system p 398 A93-53350

**PYRUVATES**

- Biotechnical production and use of pyruvic acid with special reference to coenzyme regeneration  
 [VTT-PUBS-77] p 209 N93-23369

**Q****QUALIFICATIONS**

- Instructions and advance training measures for the improvement of human reliability  
 [MBB-FE-313-S-PUB-0500] p 181 N93-21402

**QUALITY CONTROL**

- Errors in aviation maintenance - Taxonomy and control p 175 A93-27135  
 Microbiological methods for the water recovery systems test, revision 1.1  
 [NASA-CR-184390] p 64 N93-12966  
 A paradigm shift in Air Force medicine  
 [AD-A258334] p 121 N93-18159

**R****RADIANT HEATING**

- Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561

**RADIATION ABSORPTION**

- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz  
 [AD-A258136] p 120 N93-17985

**RADIATION CHEMISTRY**

- Computational study of radiation chemical processing in comet nuclei p 109 A93-17982

**RADIATION DAMAGE**

- Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774  
 Radiation damage to DNA  
 [DE92-015760] p 5 N93-10834  
 Mechanisms of microwave induced damage in biologic materials  
 [AD-A255799] p 42 N93-14648  
 Joint HVAC transmission EMF environmental study  
 [DE92-017863] p 43 N93-15211  
 Target fragmentation in radiobiology  
 [NASA-TM-4408] p 124 N93-18381

- Photobiological investigations on spores of streptomyces griseus  
 [ESA-TT-1269] p 277 N93-29274  
 Mechanisms of microwave induced damage in biologic materials  
 [AD-A264415] p 358 N93-32035

**RADIATION DOSAGE**

- Radiation exposure predictions for long-duration-stay Mars missions  
 [AIAA PAPER 92-4584] p 28 A93-13288  
 Experimental research on the anti-irradiation effects of KW-1 - Protective effect on the 5-HT content of tissues in irradiated mice p 3 A93-13542  
 Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817

- A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935

- Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975  
 Single particle effects, Biostack, and risk evaluation - Studies on the radiation risk from Galactic cosmic rays p 202 A93-32243

- Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783

- Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

- On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858

- Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223

- Radiation conditions onboard passenger aircraft p 249 A93-35230

- Ion transport across membranes under exposure of the organism to ionizing radiation --- Russian book  
 [ISBN 5-12-001601-4] p 243 A93-35679

- Radiation exposure predictions for short-duration stay Mars missions p 277 A93-39261

- Medical care on the moon p 331 A93-42126

- Radiation dose measurement and biostack experiment in biocabin on board satellite p 327 A93-44845

- Depth-dose equivalent relationship for cosmic rays at various solar minima p 391 A93-49564

- DoD space radiation concerns p 13 N93-10613

- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation p 5 N93-10974

- Freeze-dried human red blood cells  
 [AD-A253295] p 14 N93-11193

- JPRS report: Science and technology. Central Eurasia: Life sciences  
 [JPRS-ULS-92-024] p 40 N93-13033

- Application of RADTRAN to estimation of doses to persons in enclosed spaces p 97 N93-17230

- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz  
 [AD-A258136] p 120 N93-17985

- Effects of space radiation on humoral and cellular immunity in rhesus monkeys p 246 N93-26259

- Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements p 351 N93-29484

- Investigation of laser-induced retinal damage  
 [AD-A264096] p 338 N93-31094

- The Thirteenth AINSE Radiation Biology Conference: Conference handbook  
 [DE93-609131] p 338 N93-31225

**RADIATION EFFECTS**

- Effects of error-proofing and chemical/biological/radiation protective glove use on touch panel operation p 186 A93-27152

- Single particle effects, Biostack, and risk evaluation - Studies on the radiation risk from Galactic cosmic rays p 202 A93-32243

- On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858

- Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263

- Flow cytometric analysis of lymphocyte surface markers following a 1-Gy dose of gamma radiation p 281 A93-41170

- Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce p 357 A93-46468

- Specific absorption rate and radiofrequency current-to-ground in human models exposed to near-field irradiation p 360 A93-47098  
 Human exposure to galactic cosmic rays in space p 410 A93-54887

- DoD space radiation concerns p 13 N93-10613

- Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro p 13 N93-10626

- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation p 5 N93-10974

- Radiation physics, biophysics, and radiation biology  
 [DE92-013673] p 6 N93-12266

- Katz model prediction of *Caenorhabditis elegans* mutagenesis on STS-42 p 50 N93-13023

- AFRRI Reports --- Radiobiology  
 [AD-A257231] p 80 N93-15965

- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz p 120 N93-17985

- Health effects of low-frequency electric and magnetic fields p 127 N93-19838

- Potential human health effects associated with power frequency electric and magnetic fields p 221 N93-24590

- Gene transcription and electromagnetic fields  
 [DE93-010854] p 276 N93-28848

- Photobiological investigations on spores of streptomyces griseus p 277 N93-29274

- Final results of space exposed experiment developed for students p 329 N93-29702

- Continued results of the seeds in space experiment p 330 N93-29703

- The Thirteenth AINSE Radiation Biology Conference: Conference handbook p 338 N93-31225

- Mechanisms of microwave induced damage in biologic materials p 358 N93-32035

**RADIATION HAZARDS**

- Radiation exposure predictions for long-duration-stay Mars missions p 28 A93-13288

- Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774

- Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817

- Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975

- Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073

- Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

- Shielding strategies for human exploration missions  
 [SAE PAPER 921376] p 308 A93-41534

- Depth-dose equivalent relationship for cosmic rays at various solar minima p 391 A93-49564

- Space radiation health program plan  
 [NASA-TM-108036] p 123 N93-18375

- Target fragmentation in radiobiology  
 [NASA-TM-4408] p 124 N93-18381

**RADIATION INJURIES**

- Effects of laser glare on visual search performance p 180 A93-28158

- Pharmacological defense of the brain during radiation damage - Some arguments p 240 A93-35217

- AFRRI reports  
 [AD-A254581] p 49 N93-12649

**RADIATION MEASUREMENT**

- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation p 5 N93-10974

**RADIATION PROTECTION**

- Methodology for clinical testing of antiradiation means intended for manned space flight conditions p 249 A93-35236

- Human exposure to galactic cosmic rays in space p 410 A93-54887

- AFRRI reports  
 [AD-A254581] p 49 N93-12649

- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats  
 [NASA-CR-192078] p 108 N93-17806

- Space radiation health program plan  
 [NASA-TM-108036] p 123 N93-18375



- Multi-function visor p 146 N93-19770  
 Radiological assessment for Space Station Freedom  
 [NASA-TM-104758] p 128 N93-20303

**RADIATION SHIELDING**

- Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223  
 Human safety in the lunar environment p 105 N93-16867  
 Design of a radiator shade for testing in a simulated lunar environment p 108 N93-17710  
 [NASA-CR-192080]  
 Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806  
 Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018  
 Preliminary design of a radiator shading device for a lunar outpost p 139 N93-18019  
 [NASA-CR-192016]  
 A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment p 264 N93-25318  
 [DE93-007428]  
 Lunar base thermal management/power system analysis and design p 315 N93-27985

**RADIATION THERAPY**

- Target fragmentation in radiobiology  
 [NASA-TM-4408] p 124 N93-18381  
 Measuring the metastatic potential of cancer cells p 244 N93-25566

**RADIATION TOLERANCE**

- The Thirteenth AINSE Radiation Biology Conference: Conference handbook p 338 N93-31225  
 [DE93-609131]

**RADIATION TRANSPORT**

- Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073

**RADIATIVE HEAT TRANSFER**

- Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161  
 A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment p 264 N93-25318  
 [DE93-007428]

**RADIO COMMUNICATION**

- Influence of aging and practice on piloting tasks p 286 A93-39708

**RADIO FREQUENCIES**

- Instrument-approach-plate design considerations for displaying radio frequencies p 289 A93-39574  
 The locator system for wandering individuals [NASA-TM-104754] p 31 N93-11649

**RADIO WAVES**

- Specific absorption rate and radiofrequency current-to-ground in human models exposed to near-field irradiation p 360 A93-47098

**RADIOACTIVE DECAY**

- Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561

**RADIOACTIVE ISOTOPES**

- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels p 246 N93-26587  
 [DE93-007815]

**RADIOACTIVE MATERIALS**

- Application of RADTRAN to estimation of doses to persons in enclosed spaces p 97 N93-17230  
 [DE93-000758]  
 Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment p 359 N93-32423  
 [FOA-A-40065-4.5]

**RADIOBIOLOGY**

- Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL) p 39 A93-17429  
 Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785  
 On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858  
 DoD space radiation concerns p 13 N93-10613  
 [AD-A253135]  
 AFRRRI reports p 49 N93-12649  
 [AD-A254581]  
 Katz model prediction of Caenorhabditis elegans mutagenesis on STS-42 p 50 N93-13023  
 [NASA-TM-4383]  
 AFRRRI Reports --- Radiobiology p 80 N93-15965  
 [AD-A257231]  
 Target fragmentation in radiobiology p 124 N93-18381  
 [NASA-TM-4408]  
 The Thirteenth AINSE Radiation Biology Conference: Conference handbook p 338 N93-31225  
 [DE93-609131]

**RADIOGRAPHY**

- X Ray System, Lightweight Medical (XRSLM) p 123 N93-18295  
 [AD-A258159]

**RADIOIMMUNOASSAY**

- Phadiatop: A screening test for inhalant allergy p 21 N93-11313

**RADIOLOGY**

- X Ray System, Lightweight Medical (XRSLM) p 123 N93-18295  
 [AD-A258159]  
 Automated system for early breast cancer detection in mammograms p 253 N93-25568

**RADIOPATHOLOGY**

- Radiation exposure predictions for long-duration-stay Mars missions p 28 A93-13288  
 [AIAA PAPER 92-4584]  
 Experimental research on the anti-irradiation effects of KW-1 - Protective effect on the 5-HT content of tissues in irradiated mice p 3 A93-13542

**RANDOM VIBRATION**

- Investigation of nonlinear dynamic responses to random vibration in dogs p 4 A93-13722

**RANKINE CYCLE**

- Thermal control systems for low-temperature heat rejection on a lunar base p 65 N93-13717  
 [NASA-CR-191286]

**RARE GASES**

- Characteristics of the effect of inert gases on in vivo tissue respiration p 112 A93-23152

**RATINGS**

- Determinants of performance rating accuracy: A field study p 342 N93-30575  
 [AD-A264726]  
 Discomfort glare from high-intensity discharge headlamps: Effects of context and experience p 336 N93-30659  
 [PB93-174720]

**RATIONS**

- Trial of emergency ration of the Spanish Air Force p 368 N93-32247

**RATS**

- Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662  
 Dark cycle monitoring of biological specimens on Space Station Freedom p 274 A93-41551  
 [SAE PAPER 921393]  
 The neurochemical and neuropharmacological basis of motion sickness p 50 N93-13061  
 [NASA-CR-190957]  
 The challenge of biodetection for screening persons carrying explosives p 159 N93-21931  
 The acute inhalation toxicity of pyrolysis products of halon 1301 p 254 N93-25629  
 [AD-A260874]  
 Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations p 274 N93-27152  
 [DOT/FAA/AM-93/7]  
 Electrophoretic separation of cells and particles from rat pituitary and rat spleen p 276 N93-28415  
 [NASA-CR-193073]  
 The chronic effects of JP-8 jet fuel exposure on the lungs p 334 N93-30153  
 [AD-A264162]  
 An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination p 331 N93-30818  
 [AD-A264293]  
 Melatonin, the pineal gland, and circadian rhythms p 337 N93-31061  
 [AD-A264099]

**REACTION KINETICS**

- Chiral-symmetry-breaking in nonequilibrium chemical systems - The racemization influence p 269 A93-36563  
 Kinetics of peptide hydrolysis and amino acid decomposition at high temperature --- space biochemical evolution p 411 A93-53289  
 Primary charge separation in isolated photosystem 2 reaction centers p 82 N93-17189  
 [DE92-041128]  
 Regenerable biocide delivery unit, volume 2 p 275 N93-27360  
 [NASA-CR-185701-VOL-2]

**REACTION PRODUCTS**

- Generation of iodine disinfection by-products (IDP's) in a water recycle system p 307 A93-41521  
 [SAE PAPER 921362]

**REACTION TIME**

- Multimodal interactions in sensory-motor processing p 59 N93-15067  
 [AD-A255780]  
 Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz p 120 N93-17985  
 [AD-A258136]

**REACTOR DESIGN**

- Man-machine interface issues for space nuclear power systems p 60 A93-13907  
 Sabatier carbon dioxide reduction system for Space Station Freedom p 294 A93-41368  
 [SAE PAPER 921189]

**REACTOR SAFETY**

- Human factors engineering: A key element of instrumentation and control system design p 264 N93-25415  
 [DE93-006731]

**REACTOR TECHNOLOGY**

- Plasma reactor waste management systems p 68 N93-14000

**READING**

- Image enhancement filters significantly improve reading performance for low vision observers p 167 A93-28723

- Coordinated action in 3-D space p 31 N93-10994  
 [AD-A249830]

- The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 N93-26082  
 Expertise, text coherence, and constraint satisfaction: Effects on harmony and settling rate --- mental representations p 288 N93-28901  
 [AD-A262703]

**REAGENTS**

- Effect of cytoskeletal reagents on stretch activated ion channels p 245 N93-25764  
 [AD-A261089]

**REAL TIME OPERATION**

- Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles p 135 A93-22916

- Fusing human and machine skills for remote robotic operations p 137 A93-24994  
 Experimental validation of the attention switching component of the COGNET framework p 186 A93-27141

- A teleoperation training simulator with visual and kinesthetic force virtual reality p 233 A93-33448  
 Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503

- Line-of-sight determination in real-time simulations p 406 A93-52666  
 [AIAA PAPER 93-3567]

- Neural network retinal model real time implementation p 52 N93-14210  
 [AD-A255652]  
 Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision p 58 N93-14580  
 [AD-A256059]

- Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 N93-19708

- Training high performance skills using above real-time training p 225 N93-24192  
 [NASA-CR-192616]

- MAC to VAX connectivity: Heart rate spectral analysis system p 254 N93-25594  
 United States Army space experiment 601 p 260 N93-26353  
 [AD-A261460]

- Man-machine cooperation in advanced teleoperation p 366 N93-32106

**RECEPTORS (PHYSIOLOGY)**

- Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 A93-14973  
 Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis p 39 A93-16750

- Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743

- Mechanical forces and their second messengers in stimulating cell growth in vitro p 204 A93-33043  
 8-OH-DPAT does not interfere with habituation to motion-induced emesis in cats p 271 A93-38451

- Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711

- Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715

- Idaverine, an M2- vs. M3-selective muscarinic antagonist, does not prevent motion sickness in cats p 327 A93-44878

- Prediction of motion sickness susceptibility p 403 A93-55940

**RECIRCULATIVE FLUID FLOW**

- Effects of air bubble contamination in recirculating water loop p 302 A93-41450  
 [SAE PAPER 921282]

**RECOMMENDATIONS**

- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAN) p 258 N93-25595  
 Automation and robotics human performance [NASA-CR-193049] p 267 N93-26153

**RECOVERY**

- Cardiovascular responses during recovery from exercise and thermal stress p 212 A93-30282

## SUBJECT INDEX

### RECYCLING

- Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309
- Recycling and source reduction for long duration space habitation [SAE PAPER 921121] p 290 A93-41313
- Gray water recycling with a unique vapor compression distillation (VCD) design [SAE PAPER 921318] p 304 A93-41480
- Incineration for resource recovery in a closed ecological life support system p 409 A93-54826
- Technology development for lunar base water recycling p 67 N93-13999

### REDUCTION

- Linear tetrapyrroles (phycobilins) in a model prebiological system p 398 A93-53350

### REDUNDANCY

- Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846

### REFLEXES

- Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis p 7 A93-10329
- Spatial disorientation and dysfunction of orientation/equilibrium reflexes - Aeromedical evaluation and considerations p 8 A93-10336
- Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176
- A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite p 240 A93-35215
- Buspirone blocks cisplatin-induced emesis in cats p 324 A93-42668
- Baroreflex function and cardiac structure with moderate endurance training in normotensive men p 332 A93-44182
- Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572
- Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404
- Role of orientation reference selection in motion sickness [NASA-CR-191912] p 124 A93-18596
- Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 N93-32364

### REFRIGERATING

- Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390
- Hybrid oxygen system [AD-A262417] p 317 N93-28464

### REFRIGERATORS

- Space Station Freedom food management [SAE PAPER 921248] p 298 A93-41419

### REGENERATION (ENGINEERING)

- Development of a regenerable metal oxide sheet matrix CO<sub>2</sub> removal system [SAE PAPER 921298] p 302 A93-41463
- Biomass productivity and sustainability of a bioregenerative life-support system [SAE PAPER 921359] p 307 A93-41518
- Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization [SAE PAPER 921391] p 309 A93-41549
- Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost p 346 A93-42124
- Regenerative life support technology challenges for the Space Exploration Initiative p 346 A93-42128

### REGENERATION (PHYSIOLOGY)

- Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- Nerves and tissue repair [AD-A255299] p 53 N93-14535
- Annual report [NASA-CR-191389] p 105 N93-16840
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers [NASA-CR-177602] p 149 N93-20065
- The USO-concept applied to a biological model experiment p 210 N93-24379

### REGENERATIVE FUEL CELLS

- SPE water electrolyzers in support of the lunar outpost p 315 N93-27977

### REGOLITH

- Potential of derived lunar volatiles for life support p 67 N93-13998
- Vertical regolith shield wall construction for lunar base applications p 107 N93-17446

- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806
- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018

### REGRESSION ANALYSIS

- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions [AD-A252820] p 26 N93-11779
- Perceptual dimensions of visual scenes relevant for simulating low-altitude flight p 57 N93-12662
- Pilot Candidate Selection Method (PCSM): What makes it work? [AD-A262871] p 340 N93-29481

### REGULATORY MECHANISMS (BIOLOGY)

- Method of selection of astronauts cardiovascular regulative function under simulated weightlessness p 91 A93-19995
- Investigation of the character of changes in the 'central' temperature of the body in cold environment, using a rabbit-body thermoregulation model p 112 A93-25651
- Measurement of behavioral thermoregulation [PB92-217033] p 172 N93-21046
- Cerebral autoregulation in microgravity p 173 N93-21112

### RELATIVE BIOLOGICAL EFFECTIVENESS (RBE)

- Target fragmentation in radiobiology [NASA-TM-4408] p 124 N93-18381

### RELIABILITY

- The problem of the pilot's professional reliability p 410 A93-55334
- Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA [DE93-001923] p 321 N93-28942
- The position test: A computer generated process for acquisition of inductive logic thinking p 343 N93-31232

### RELIABILITY ANALYSIS

- Instructions and advance training measures for the improvement of human reliability [MBB-FE-313-S-PUB-0500] p 181 N93-21402
- Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA [DE93-001923] p 321 N93-28942
- Phases of the project development and examination methodologies p 343 N93-31231

### RELIEF MAPS

- An exploratory study of plan-view terrain displays for air carrier operations p 289 A93-39573

### REMOTE CONTROL

- Eye slaved pointing system for teleoperator control p 101 A93-19090
- Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155
- Transforming human hand motion for telemanipulation p 390 A93-49394
- Operator performance with alternative manual control modes in teleoperation p 390 A93-49397
- Interactive and cooperative sensing and control for advanced teleoperation p 391 A93-49443
- Remote surface inspection system --- of large space platforms p 410 A93-55469
- Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398
- A study of the effects of lens focal length on remote driver performance [AD-A263191] p 321 N93-28941

### REMOTE HANDLING

- Integrated tools for teleoperated satellite repair p 409 A93-54845
- Initial experiments with a myoelectric-based muscle sensor [DE92-016034] p 237 N93-25099

### REMOTE MANIPULATOR SYSTEM

- Space robotics and its man-machine interface p 27 A93-11204
- Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222
- The Space Station Remote Manipulator System p 138 A93-25487
- Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues [AIAA PAPER 93-1156] p 230 A93-31031
- Active vibration damping of the Space Shuttle remote manipulator system p 231 A93-31993
- Manipulator system for module redocking on the Mir Orbital Complex p 263 A93-35534
- A force-reflecting teleoperated hand system for the study of tactile sensing in precision manipulation p 263 A93-35536
- A procedure for the frequency analysis of telerobotic tasks data p 392 A93-50513

## RESEARCH FACILITIES

- Human-in-the-loop evaluation of RMS Active Damping Augmentation [AIAA PAPER 93-3875] p 393 A93-51460
- Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032

### REMOTE SENSING

- A low cost helmet-mounted camera/display system for field testing teleoperator tasks p 408 A93-53122
- New approaches to the measurement of chlorophyll, related pigments and productivity in the sea [NASA-CR-190879] p 42 N93-13612
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-020] p 244 N93-25406

### REMOTELY PILOTED VEHICLES

- Eye slaved pointing system for teleoperator control p 101 A93-19090
- Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles p 135 A93-22916

### RENAL FUNCTION

- Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035
- Gravitational stress and volume regulation p 165 A93-28709
- Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans p 332 A93-44180
- Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans p 381 A93-49293

### RENDEZVOUS TRAJECTORIES

- Operator-assisted planning and execution of proximity operations subject to operational constraints p 194 N93-21436

### REPRODUCTION (BIOLOGY)

- The pineal gland - Its possible roles in human reproduction p 204 A93-33036
- Assessment of programs in space biology and medicine [NASA-CR-190930] p 41 N93-13327
- Joint HVAC transmission EMF environmental study [DE92-017863] p 43 N93-15211

### REQUIREMENTS

- Columbus payload requirements in human physiology p 220 N93-24386

### RESCUE OPERATIONS

- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment) [AD-A25525] p 70 N93-14554
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 N93-17697
- TALON and CRADLE: Systems for the rescue of tumbling spacecraft and astronauts p 196 N93-22268
- Simplified Aid For Crew Rescue (SAFR) p 313 N93-27793
- Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment [FOA-A-40065-4.5] p 359 N93-32423

### RESEARCH AND DEVELOPMENT

- NASA's telerobotics research program p 263 A93-35566
- Advanced life support systems in lunar and Martian environments utilizing a higher plant based engineering paradigm [SAE PAPER 921286] p 302 A93-41452
- Review of the space medico-engineering research in China [AAS PAPER 91-623] p 402 A93-55802
- Institute for the Study of Human Capabilities [AD-A256091] p 69 N93-14427
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-025] p 244 N93-25405
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-020] p 244 N93-25406
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-022] p 253 N93-25407
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-93-005] p 276 N93-28683
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-027] p 276 N93-28684

### RESEARCH FACILITIES

- LIAC - A closed ecosystem research facility --- Life In A Can p 347 A93-42129
- Radiation physics, biophysics, and radiation biology [DE92-013673] p 6 N93-12266

## RESEARCH MANAGEMENT

- The USO-concept applied to a biological model experiment p 210 N93-24379  
Columbus payload requirements in human physiology p 220 N93-24386

### RESEARCH MANAGEMENT

- Radiation physics, biophysics, and radiation biology [DE92-013673] p 6 N93-12266  
Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 N93-28835

### RESEARCH PROJECTS

- Radiation physics, biophysics, and radiation biology [DE92-013673] p 6 N93-12266  
Earth to lunar CELSS evolution p 351 N93-29727  
Design of biomass management systems and components for closed loop life support systems p 351 N93-29728  
Exercise/recreation facility for a lunar or Mars analog p 352 N93-29733  
Automation of closed environments in space for human comfort and safety p 352 N93-29734  
Mars habitat p 352 N93-29747  
GENESIS 2: Advanced lunar outpost p 352 N93-29760

- An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine [AD-A265497] p 360 N93-31917

### RESEARCH VEHICLES

- A study of the effects of lens focal length on remote driver performance [AD-A263191] p 321 N93-28941

### RESIDUAL GAS

- Design of ion source of respiratory mass spectrometer p 11 A93-13713

### RESIDUES

- Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 N93-19399

### RESISTORS

- Investigation into the common mode rejection ratio of the physiological signal conditioner circuit p 245 N93-26073

### RESONANCE

- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 N93-26587

### RESONANT FREQUENCIES

- Investigation of nonlinear dynamic responses to random vibration in dogs p 4 A93-13722

### RESOURCES MANAGEMENT

- The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704

### RESPIRATION

- Design of ion source of respiratory mass spectrometer p 11 A93-13713  
Determinants of poststimulus potentiation in humans during NREM sleep p 78 A93-20034  
Characteristics of the effect of inert gases on in vivo tissue respiration p 112 A93-23152  
Metabolic factors influencing myocardial recovery from acidosis (ClC3) [AD-A252376] p 14 N93-10796  
The production and use of aeroponically grown inocula of VAM fungi in the native plant nursery [PB92-204973] p 43 N93-15208  
Improved inhalation technology for setting safe exposure levels for workplace chemicals p 174 N93-22164  
Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628  
A linear, time-varying simulation of the respiratory tract system [DE93-004515] p 218 N93-24009  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367  
The acute inhalation toxicity of pyrolysis products of halon 1301 [AD-A260874] p 254 N93-25629  
Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757

### RESPIRATORS

- Physiological effects of positive pressure ventilation [AD-A254809] p 49 N93-12751  
Evaluation and optimization of a flexible filtration system for respiratory protection system 21 [AD-A262467] p 284 N93-28758

### RESPIRATORY DISEASES

- Potential health effects of fume particles on the crew of spacecrafts [SAE PAPER 921387] p 308 A93-41545  
Coccidioidomycosis - A persistent threat to deployed populations p 380 A93-49228

- Hemodynamic effects of altitude exposure and oxygen administration in chronic obstructive pulmonary disease p 383 A93-49571

### Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine

- [AGARD-CP-518] p 14 N93-11283  
Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300  
Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine p 20 N93-11311  
The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312

### Phadiatop: A screening test for inhalant allergy

- p 21 N93-11313  
In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automatized enzyme immunoassay method to dose specific IgE p 21 N93-11314  
Asthma in aircrew: Assessment, treatment and disposition p 21 N93-11315  
Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317  
Evaluation of NO(x)-induced toxicity [AD-A261034] p 283 N93-28122

### RESPIRATORY PHYSIOLOGY

- Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia p 79 A93-20038  
Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043  
Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682  
Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683  
Assessing pilot workload - Why measure heart rate, HRV and respiration? p 168 A93-28741  
Effect of chronic hypoxia on hypoxic ventilatory response in awake rats p 323 A93-42187  
Problems of respiratory physiology during space flight p 332 A93-44849  
Asthma in aircrew: Assessment, treatment and disposition p 21 N93-11315  
Cardiopulmonary discipline science plan [NASA-TM-108040] p 125 N93-19648  
Respiratory response to varying degrees of tilt and lower body negative pressure p 173 N93-21114

### RESPIRATORY RATE

- Changes in the brain blood flow and respiration during psychoemotional stress p 252 A93-36723  
Respiration curves as an index of pilot workload p 332 A93-45320

### RESPIRATORY REFLEXES

- Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244  
Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120  
Effect of chronic hypoxia on hypoxic ventilatory response in awake rats p 323 A93-42187  
Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188

### RESPIRATORY SYSTEM

- The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860  
Control of breathing under conditions of altered atmospheric density during muscular work p 89 A93-18288  
Parameters of external breathing in an excess-pressure atmosphere p 76 A93-18298  
An analysis of the respiratory muscle fatigue under resistive loading when breathing gas mixtures containing different amounts of oxygen p 76 A93-18299  
Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation p 77 A93-18301  
Informative value of the respiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors p 248 A93-35222  
Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) [AD-A253393] p 30 N93-10217  
Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21) [AD-A253394] p 30 N93-10288  
A linear, time-varying simulation of the respiratory tract system [DE93-004515] p 218 N93-24009  
The acute inhalation toxicity of pyrolysis products of halon 1301 [AD-A260874] p 254 N93-25629

- Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757  
Evaluation and optimization of a flexible filtration system for respiratory protection system 21 [AD-A262467] p 284 N93-28758

### RESPONSE BIAS

- Perceptual bias for forward-facing motion p 339 A93-44940  
Super auditory localization for improved human-machine interfaces [AD-A254699] p 34 N93-12229

### RESPONSES

- Cardiovascular responses during recovery from exercise and thermal stress p 212 A93-30282

### REST

- Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035

### RESUSCITATION

- Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin [AD-A258185] p 120 N93-17900

### RETENTION (PSYCHOLOGY)

- Aging, expertise, and narrative processing p 180 A93-28724

### RETICLES

- Eye slaved pointing system for teleoperator control p 101 A93-19090

### RETINA

- Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate p 214 A93-32120  
Microwaves and the visual analyzer p 250 A93-35247  
Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710  
Analysis of retinal function following laser irradiation [AD-A255649] p 52 N93-14163  
Neural network retinal model real time implementation [AD-A255652] p 52 N93-14210  
Retinal modeling: Segmenting motion from spatio-temporal inputs using neural networks [AD-A258854] p 125 N93-19369  
Computer based analysis and synthesis of retinal function [AD-A260514] p 221 N93-24420  
JPRS report: Science and technology: Central Eurasia: Life sciences [JPRS-ULS-92-025] p 244 N93-25405  
Receptor and neural aliasing [AD-A261438] p 261 N93-26489  
Analysis of visual loss from retinal lesions [AD-A264692] p 336 N93-30494  
A simple computational model of center-surround receptive fields in the retina [AD-A264723] p 336 N93-30515  
An algorithm for simple and complex feature detection: From retina to primary visual cortex [AD-A264306] p 337 N93-30897  
Photoreceptors regulating circadian behavior: A mouse model [AD-A264881] p 337 N93-30908  
Investigation of laser-induced retinal damage [AD-A264096] p 338 N93-31094

### RETINAL IMAGES

- Model for the computation of self-motion in biological systems p 97 A93-17673  
Human low vision image warping - Channel matching considerations p 231 A93-32444  
Retinal information processing for minimum laser lesion detection and cumulative damage [AD-A259195] p 171 N93-20563  
Modelling and simulation of human retinal vision processing p 335 N93-30269

### RETINENE

- Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720

### RETRIEVAL

- Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037

### REVERBERATION CHAMBERS

- Perceptual effects of synthetic reverberation on three-dimensional audio systems p 257 A93-36583

### REVERSE OSMOSIS

- Modeling of membrane processes for air revitalization and water recovery [SAE PAPER 921352] p 306 A93-41511  
High-recovery low-pressure reverse osmosis [SAE PAPER 921353] p 306 A93-41512

### RHEOENCEPHALOGRAPHY

- The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649

**RHYTHM (BIOLOGY)**

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439  
Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214

Effectiveness of birthdate biorhythm theory on flight accidents p 127 A93-19710  
The effects of an antijet lag diet p 370 A93-32263

**RIBONUCLEIC ACIDS**

Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442  
Experimental studies on the origin of the genetic code and the process of protein synthesis - A review update p 73 A93-17822

The evolution of aminoacyl-tRNA synthetases, the biosynthetic pathways of amino acids and the genetic code p 73 A93-17825  
Caenorhabditis elegans - A model system for space biology studies p 80 A93-20665  
Selection of a ribozyme that functions as a superior template in a self-copying reaction p 111 A93-22053  
Nucleotide analogs based on pentaerythritol - An hypothesis p 325 A93-43794

In vitro selection of optimal DNA substrates for T4 RNA ligase p 329 A93-44939  
Ribozymes - A distinct class of metalloenzymes p 398 A93-54163  
Group II intron RNA catalysis of progressive nucleotide insertion - A model for RNA editing p 398 A93-55292  
Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and other minerals p 412 A93-55998  
A model for the prebiotic synthesis of peptides which throws light on the origin of the genetic code and the observed chirality of life p 412 A93-56000  
Isolation of new ribozymes from a large pool of random sequences p 400 A93-56548  
Mechanisms of microwave induced damage in biologic materials p 42 A93-14648

[AD-A255799] p 42 A93-14648  
Characterization and classification of strains of Francisella tularensis isolated in the central Asian locus of the Soviet Union and in Japan p 275 A93-28200  
Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia p 275 A93-28212  
[FOA-B-40422-4.4] p 275 A93-28212  
Mechanisms of microwave induced damage in biologic materials p 358 A93-32035  
[AD-A264415] p 358 A93-32035

**RIBOSE**

Nucleotide analogs based on pentaerythritol - An hypothesis p 325 A93-43794

**RIMS**

Wheels for wheelchairs and the like p 106 A93-17042  
[NASA-CASE-MFS-28632-1] p 106 A93-17042

**RISK**

Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774  
Fires on board aircraft: Toxicological risk in flight p 126 A93-19694  
The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 A93-25595  
Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 A93-32253  
Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces p 363 A93-32254

**ROBOT ARMS**

Microgravity flight testing of a laboratory robot p 62 A93-15583  
[AAS PAPER 91-035] p 62 A93-15583  
Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms p 101 A93-18710

Evaluating robot procedures and tasks for the flight telerobotic servicer p 187 A93-27156  
An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137

Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517

EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory p 231 A93-31522

Development of a large space robot - A multi-segment approach, II p 262 A93-34013

[AIAA PAPER 93-1464] p 262 A93-34013

Manipulator system for module redocking on the Mir Orbital Complex p 263 A93-35534  
A force-reflecting teleoperated hand system for the study of tactile sensing in precision manipulation p 263 A93-35536

HERA - A reliable and safe space robot p 263 A93-35571  
Research of a free-flying telerobot, IV - Development of dual-arm manipulation system p 411 A93-56254

Research of a free-flying telerobot, V - Handling a target with multi-arms p 411 A93-56255  
Skill compensation and dynamic coupling of macro/smart effector system p 411 A93-56260  
TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development p 367 A93-32112

**ROBOT CONTROL**

Space robotics and its man-machine interface p 27 A93-11204

Teleoperation to robotics at Langley Research Center p 101 A93-18569  
Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms p 101 A93-18710

Space based robot manipulators - Dynamics of contact and trajectory planning for impact minimization p 135 A93-22827

Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846

Initial experiments on the end-point control of a 2-DOF long-reach elastic manipulator p 183 A93-27024

World model and its uncertainty in supervisory robot control p 183 A93-27027

Emergence of telerobotic control enhancement from research in machine autonomy p 183 A93-27028

A telerobotic virtual control system p 183 A93-27030

Incorporating robot vision in tele-autonomous systems p 184 A93-27031

Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments p 184 A93-27032

Real time proximity cues for teleoperation using model based force reflection p 184 A93-27033

Evaluating robot procedures and tasks for the flight telerobotic servicer p 187 A93-27156

Flight Telerobotic Servicer legacy p 190 A93-29106

Teleprogramming a cooperative space robotic workcell for Space Station p 190 A93-29109

Person-like intelligent systems architectures for robotic shared control and automated operations p 191 A93-29113

Recent developments at the Goddard Engineering Test Bed --- for force reflecting teleoperation system p 192 A93-29115

Human-like agents with posture planning ability p 192 A93-29118

A distributed telerobotics system for space operations p 192 A93-29132

Testbed for remote telepresence research p 193 A93-29135

Robot free-flyers in space extravehicular activity p 193 A93-29141

Development of a large space robot - A multi-segment approach, I p 261 A93-34012

[AIAA PAPER 93-1463] p 261 A93-34012

Visual specification of robot motion p 348 A93-42845

Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598

Designs and development of a master-slave teleoperated robot p 390 A93-49357

Transforming human hand motion for telemanipulation p 390 A93-49394

Interactive and cooperative sensing and control for advanced teleoperation p 391 A93-49443

A procedure for the frequency analysis of telerobotic tasks data p 392 A93-50513

Ground-remote control for space station telerobotics with time delay p 392 A93-50592

[AAS PAPER 92-052] p 392 A93-50592

Telerobot control mode performance assessment p 392 A93-50593

[AAS PAPER 92-053] p 392 A93-50593

A manipulator control testbed - Implementation and applications p 392 A93-50594

[AAS PAPER 92-054] p 392 A93-50594

Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot p 392 A93-51449

[AIAA PAPER 93-3863] p 392 A93-51449

Motion planning of a dual-arm free-floating manipulator with inertially fixed base p 393 A93-51450

[AIAA PAPER 93-3864] p 393 A93-51450

A space manipulator with inertially fixed base? p 393 A93-51452

[AIAA PAPER 93-3866] p 393 A93-51452

Intelligent sensing and control for advanced teleoperation p 409 A93-54158

Design requirements for force reflecting master controllers p 139 A93-18035

A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever p 365 A93-31844

[NASA-CR-193301] p 365 A93-31844

**ROBOT DYNAMICS**

Initial experiments on the end-point control of a 2-DOF long-reach elastic manipulator p 183 A93-27024

Grasp synthesis for planar and solid objects p 184 A93-27034

Testbed for remote telepresence research p 193 A93-29135

Intelligent virtual interfaces for telerobotics p 193 A93-29136

Robot free-flyers in space extravehicular activity p 193 A93-29141

Visual specification of robot motion p 348 A93-42845

Motion planning of a dual-arm free-floating manipulator with inertially fixed base p 393 A93-51450

[AIAA PAPER 93-3864] p 393 A93-51450

Optimal manipulator trajectories for space robots p 410 A93-55838

[AAS PAPER 91-669] p 410 A93-55838

EVA and telerobot interaction p 312 A93-27792

**ROBOT SENSORS**

Accuracy of locating circular features using machine vision --- for robotic systems p 182 A93-27022

Initial experiments on the end-point control of a 2-DOF long-reach elastic manipulator p 183 A93-27024

Vision navigator for free-flying robots p 183 A93-27025

Incorporating robot vision in tele-autonomous systems p 184 A93-27031

Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments p 184 A93-27032

A modular head/eye platform for real-time reactive vision p 320 A93-28897

[OUEL-1941/92] p 320 A93-28897

Interactive and cooperative sensing and control for advanced teleoperation p 366 A93-32108

**ROBOTICS**

Teleoperation to robotics at Langley Research Center p 101 A93-18569

The strategic role of automation and robotics for Columbus utilization p 181 A93-26567

Future needs for space robots for SEI --- Space Exploration Initiative p 182 A93-27002

Characteristics and requirements of robotic manipulators for space operations p 182 A93-27003

Grasp synthesis for planar and solid objects p 184 A93-27034

Intelligent robotics capabilities of the teleautonomy testbed p 184 A93-27035

Cooperative intelligent robotics in space III; Proceedings of the Meeting, Boston, MA, Nov. 16-18, 1992 p 190 A93-29101

[SPIE-1829] p 190 A93-29101

An overview of the dynamic predictive architecture for robotic assistants p 191 A93-29112

Person-like intelligent systems architectures for robotic shared control and automated operations p 191 A93-29113

Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues p 230 A93-31031

[AIAA PAPER 93-1156] p 230 A93-31031

Physical and digital simulations for IVA robotics p 391 A93-49445

Motion planning of a dual-arm free-floating manipulator with inertially fixed base p 393 A93-51450

[AIAA PAPER 93-3864] p 393 A93-51450

A space manipulator with inertially fixed base? p 393 A93-51452

[AIAA PAPER 93-3866] p 393 A93-51452

Integrated tools for teleoperated satellite repair p 409 A93-54845

Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier p 65 A93-13486

Architecture of autonomous systems p 266 A93-26047

[NASA-CR-192974] p 266 A93-26047

Automation and robotics human performance p 267 A93-26153

[NASA-CR-193049] p 267 A93-26153

A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever p 365 A93-31844

[NASA-CR-193301] p 365 A93-31844

**ROBOTS**

Vision navigator for free-flying robots p 183 A93-27025

Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037

Ground-based control of Space Station Freedom-based robots p 263 A93-35570

- Physical and digital simulations for IVA robotics  
p 391 A93-49445
- The perception of articulated motion: Recognizing moving light displays  
[AD-A256046] p 59 N93-14660
- Initial experiments with a myoelectric-based muscle sensor  
[DE92-016034] p 237 N93-25099
- A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever  
[NASA-CR-193301] p 365 N93-31844
- Integration of advanced teleoperation technologies for control of space robots  
p 366 N93-32107
- TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development  
p 367 N93-32112

**ROBUSTNESS (MATHEMATICS)**

- 3-D surface description from binocular stereo  
p 61 A93-14727
- The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft  
p 146 N93-19772
- A robust model for finding optimal evolutionary trees  
[DE93-010682] p 330 N93-30483

**ROCKET FLIGHT**

- Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster*  
p 1 A93-11691

**ROTARY WING AIRCRAFT**

- Retroperitoneal fibrosis as a cause of hypertension in an aviator - A case report  
p 212 A93-30284

**ROTARY WINGS**

- Helicopter simulation: An aircrew training and qualification perspective  
p 342 N93-30676

**ROTATING ENVIRONMENTS**

- Factors influencing perceived angular velocity  
p 97 A93-17800
- Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report  
p 375 A93-49206
- The internal dynamics of slowly rotating biological systems  
p 375 A93-49208
- Centrifuges - Evolution of their uses in plant gravitational biology and new directions for research on the ground and in spaceflight  
p 376 A93-49211
- The fast rotating clinostat - A history of its use in gravitational biology and a comparison of ground-based and flight experiment results  
p 376 A93-49212
- How well does the clinostat mimic the effect of microgravity on plant cells and organs?  
p 376 A93-49213
- Rotational speed control  
p 365 N93-31457

**ROTATION**

- Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry  
p 214 A93-32176
- Vestibular afferent responses to microrotational stimuli  
p 328 A93-44930
- The neurochemical and neuropharmacological basis of motion sickness  
[NASA-CR-190957] p 50 N93-13061

**ROUTES**

- A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks  
p 367 N93-32151

**RUNNING**

- Energetics of walking and running - Insights from simulated reduced-gravity experiments  
p 116 A93-21687
- Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids  
p 160 A93-27048

**S**

**SABATIER REACTION**

- Sabatier carbon dioxide reduction system for Space Station Freedom  
[SAE PAPER 921189] p 294 A93-41368

**SACCADIC EYE MOVEMENTS**

- Predictable eye-head coordination during driving  
p 57 A93-16373
- Involuntary attentional capture by abrupt onsets  
p 97 A93-17974
- Eye movements and visual information processing  
[AD-A250198] p 24 N93-10278
- Coordinated action in 3-D space  
[AD-A249830] p 31 N93-10994
- Multimodal interactions in sensory-motor processing  
[AD-A255780] p 59 N93-15067
- Eye movements and visual information processing  
[AD-A259955] p 225 N93-24297

**SAFETY**

- HERA - A reliable and safe space robot  
p 263 A93-35571

- The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600
- Upper interior head protection. Volume 1. The development of a research test procedure  
[PB93-113769] p 194 N93-21537
- Gene transcription and electromagnetic fields  
[DE93-010854] p 276 N93-28848

**SAFETY DEVICES**

- Physiological stress from chemical defense clothing and equipment  
[AD-A255786] p 51 N93-14028
- Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station  
[NASA-CR-192015] p 139 N93-17973
- The challenge of biodegradation for screening persons carrying explosives  
p 159 N93-21931

**SAFETY FACTORS**

- A method for the theoretical calculation of the parameters of single-stage decompression with equal probability of safety  
p 160 A93-26832
- Safety issues of manipulator systems under computer control  
p 192 A93-29121
- Cockpit checklists - Concepts, design, and use  
p 389 A93-52506
- The limits of human impact acceleration tolerance  
[AIAA PAPER 93-3572] p 400 A93-52692
- Human engineering issues for data link systems  
[SAE ARD 50027] p 410 A93-54874
- Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate  
p 19 N93-11306

- Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population  
p 19 N93-11307
- Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine  
p 20 N93-11311
- Improved inhalation technology for setting safe exposure levels for workplace chemicals  
p 174 N93-22164

**SAFETY MANAGEMENT**

- Hazard and risk assessment for surface components of a lunar base Controlled Ecological Life Support System  
[SAE PAPER 921285] p 302 A93-41451
- First entry operations for spacecraft  
[SAE PAPER 921384] p 308 A93-41542

**SALIVA**

- Salivary total protein and experimental Coriolis sickness  
p 383 A93-49573

**SALIVARY GLANDS**

- Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy  
p 155 A93-28725
- Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands  
p 156 A93-28746

**SALTS**

- Blood and urine responses to ingesting fluids of various salt and glucose concentrations --- to combat orthostatic intolerance  
p 83 A93-17528

**SALYUT SPACE STATION**

- Formation of the hypokinetic syndrome in the digestive system under conditions of weightlessness  
p 119 A93-25600

**SAMPLING**

- Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program  
[DOT/FAA/AM-92/15] p 218 N93-24088

**SANITATION**

- Life support systems  
[AAS PAPER 91-320] p 409 A93-54308

**SARCOPLASMIC RETICULUM**

- Accumulation of calcium ions in the myocardial sarcoplasmic reticulum of restrained rats exposed to a pulsed electromagnetic field  
p 240 A93-35225

**SATELLITE ATMOSPHERES**

- Titan  
p 114 N93-18553

**SATELLITE CONTROL**

- Human-computer cooperative problem solving in satellite ground control  
p 188 A93-27163
- From pilot's associate to satellite controller's associate  
p 32 N93-11922

**SATELLITE GROUND SUPPORT**

- Ground operation of the mobile servicing system on Space Station Freedom  
p 190 A93-29107

**SATELLITE IMAGERY**

- United States Army space experiment 601  
[AD-A261460] p 260 N93-26353

**SATELLITE OBSERVATION**

- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-020] p 244 N93-25406

**SATELLITE-BORNE INSTRUMENTS**

- Machine vision in space  
p 395 A93-52641

**SCALE EFFECT**

- Perceptual scaling of whole-body low frequency linear oscillatory motion  
p 379 A93-49225

**SCALE MODELS**

- Human factors evaluation of the HL-20 full-scale model  
p 409 A93-53746

**SCALING LAWS**

- Multidimensional scaling analysis of terrain features relevant for simulating low-altitude flight  
p 188 A93-27186

**SCENE ANALYSIS**

- 3-D surface description from binocular stereo  
p 61 A93-14727
- Transfer effects of scene content and crosswind in landing instruction  
p 62 A93-15665
- Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments  
p 184 A93-27032
- Flight mechanics of high-performance aircraft  
[ISBN 0-521-34123-X] p 365 A93-47019
- Auditory spectro-temporal pattern analysis  
[AD-A264691] p 361 N93-31981

**SCHEDULES**

- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm  
[AD-A258146] p 122 N93-18292

**SCHEDULING**

- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm  
[AD-A259243] p 171 N93-20580
- The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness  
[AD-A263033] p 283 N93-27923

**SCHOOLS**

- Ground based simulation in test and evaluation education  
[AIAA PAPER 92-4066] p 24 A93-11252

**SCIENCE**

- Diversity in biological research  
[NSF-92-19] p 42 N93-13700

**SCIENTIFIC VISUALIZATION**

- Visual data interpretation; Proceedings of the Meeting, San Jose, CA, Feb. 10-11, 1992  
[SPIE-1668] p 391 A93-49451

**SCIENTISTS**

- Prologue to Action. Life Sciences Education and Science Literacy  
[PB93-107514] p 159 N93-21230
- An on-orbit viewpoint of life sciences research  
p 206 N93-22629

**SCORING**

- The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600

**SCREENING**

- Some personality and aptitude characteristics of Air Traffic Control Specialist trainees  
p 388 A93-52301

**SCREWS**

- The design of mechanically compatible fasteners for human mandible reconstruction  
p 253 N93-25569

**SEA FLOOR SPREADING**

- Deep-sea smokers - Windows to a subsurface biosphere?  
p 397 A93-53284
- Aqueous high-temperature and high-pressure organic geochemistry of hydrothermal vent systems  
p 397 A93-53285

**SEA LEVEL**

- Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels  
p 8 A93-10332
- Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894

**SEA WATER**

- Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate  
[NASA-CR-193278] p 330 N93-30665

**SEARCHING**

- Display format and highlight validity effects on search performance using complex visual displays  
p 187 A93-27160

- Disruption and maintenance of skilled visual search as a function of degree of consistency  
p 389 A93-52501

**SEATS**

- Reclined seating in advanced crewstations - Human performance considerations  
p 186 A93-27151
- Design guide for the ergonomic aspects of helicopter crew seating  
[ISVR-TR-209] p 65 N93-13464
- Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] p 70 N93-14713
- Portable seat lift  
[NASA-CASE-MFS-28610-1] p 106 N93-17045

- Design of a portable powered seat lift  
p 195 N93-22190
- Microcomputer based software for biodynamic simulation  
p 196 N93-22191
- SECTIONS**
- Experimental study of volatile metabolites of human body  
p 11 A93-13711
- Cytokine secretion by immune cells in space  
p 153 A93-28694
- Separation of rat pituitary secretory granules by continuous flow electrophoresis  
p 329 A93-44933
- A modified method for investigating gastric secretion in aviation medical examination  
p 359 A93-45692
- SEDATIVES**
- The effects of Benadryl and Hismanal on mood, physiological measures, antihistamine detection, and subjective symptoms  
p 385 A93-52302
- SEDIMENTS**
- Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments  
p 80 A93-20672
- SEEDS**
- A study of the effects of micro-gravity on seed germination  
p 40 N93-13167
- Final results of space exposed experiment developed for students  
p 329 N93-29702
- Continued results of the seeds in space experiment  
p 330 N93-29703
- SEGMENTS**
- Development of a large space robot - A multi-segment approach. I  
[AIAA PAPER 93-1463] p 261 A93-34012
- Development of a large space robot - A multi-segment approach. II  
[AIAA PAPER 93-1464] p 262 A93-34013
- SEIZURES**
- Automatic detection of seizures with applications  
p 254 N93-25592
- SELECTION**
- Mir 1992 operations and crew training  
p 226 N93-24352
- SELF ERECTING DEVICES**
- Prefabricated foldable lunar base modular systems for habitats, offices, and laboratories  
p 106 N93-17444
- SELF ORGANIZING SYSTEMS**
- Connectionist models and linguistic theory: Investigations of stress systems in language  
[AD-A265450] p 364 N93-32064
- SELF TESTS**
- Time stress measurement devices for enhancement of onboard bit performance  
p 144 N93-19762
- SEMANTICS**
- Graphical displays - Implications for divided attention, focused attention, and problem solving  
p 102 A93-19984
- Interpretation as abduction  
[AD-A259608] p 225 N93-24227
- SEMICIRCULAR CANALS**
- Response characteristics of semicircular canal in cats under linear acceleration  
p 3 A93-13536
- Vestibular afferent responses to microrotational stimuli  
p 328 A93-44930
- Hair cell tufts and afferent innervation of the bullfrog crista ampullaris  
p 329 A93-44931
- Micromotional studies of utricular and canal afferents  
[NASA-CR-192703] p 207 N93-22800
- Neural processing of gravity information  
[NASA-CR-192766] p 209 N93-23233
- SENSITIVITY**
- Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility  
[SAE PAPER 921214] p 273 A93-41390
- Spatial contrast sensitivity through aviator's night vision imaging system  
p 393 A93-52300
- Animal models in motion sickness research  
p 399 A93-55936
- Prediction of motion sickness susceptibility  
p 403 A93-55940
- Motion sickness susceptibility and behavior  
p 405 A93-55948
- Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate  
p 19 N93-11306
- Autonomic physiological data associated with simulator discomfort  
[NASA-CR-177609] p 222 N93-24738
- SENSORIMOTOR PERFORMANCE**
- Accuracy of aimed arm movements in changed gravity  
p 56 A93-16159
- Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions  
p 48 A93-16161
- Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain  
p 77 A93-18300
- Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space  
p 130 A93-25207
- Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity  
p 151 A93-26548
- The character of spontaneous oculomotor activity in weightlessness and during readaptation  
p 248 A93-35219
- Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks  
p 287 A93-41166
- Cognitive performance and event-related brain potentials under simulated high altitudes  
p 331 A93-42189
- Multimodal interactions in sensory-motor processing  
[AD-A255780] p 59 N93-15067
- Aimed arm movements under changed gravity  
p 193 N93-21113
- Eye-head-arm coordination and spinal reflexes in weightlessness  
p 236 N93-24362
- Coordinated action in 3-D space  
[AD-A261418] p 261 N93-26449
- Human capabilities and limitations in situation awareness  
p 319 N93-28863
- SENSORY DEPRIVATION**
- Vestibulo-oculomotor responses under conditions of immersion hypokinesia  
p 251 A93-35256
- Psychophysical analyses of perceptual representations  
[AD-A255432] p 58 N93-14510
- SENSORY FEEDBACK**
- Human behavior in virtual environments  
p 233 A93-33447
- Modeling of a full vision system using combined Visual/Haptic search for remote object identification  
[AD-A260977] p 266 N93-25867
- Integration of advanced teleoperation technologies for control of space robots  
p 366 N93-32107
- SENSORY PERCEPTION**
- K.E. Tsiolkovsky on individual time perception and some characteristics of intuitive perception of the properties of time at different levels of motor activity and health  
p 98 A93-18413
- Consequences of a basic model of external-information perception  
p 98 A93-18414
- Development of a tactile perceived attitude transducer  
[AD-A253724] p 25 N93-11081
- The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB  
[AD-A254840] p 27 N93-12432
- Institute for the Study of Human Capabilities  
[AD-A256091] p 69 N93-14427
- The role of central monoaminergic systems in arousal and selective attention  
[AD-A258500] p 122 N93-18264
- Role of orientation reference selection in motion sickness  
[NASA-CR-191912] p 124 N93-18596
- Principles for integrating voice I/O in a complex interface  
p 146 N93-19774
- Biomagnetic localization from transient quasi-static events  
[DE93-007328] p 253 N93-25186
- Neuropsychological components of object identification  
[AD-A261449] p 259 N93-26347
- Theory of signal detection and its application to visual target acquisition: A review of the literature  
[AD-A262920] p 288 N93-28307
- SENSORY STIMULATION**
- Short-term microgravity to isolate graviperception in cells  
p 111 A93-21901
- Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness  
p 239 A93-35211
- Spectral motion produces an auditory after-effect  
p 405 A93-55579
- Developing virtual cockpits  
p 145 N93-19764
- SEPARATION**
- Process for selectively recovering algae and protozoa  
[NASA-CASE-MFS-26124-1-NPO] p 276 N93-29174
- SEPARATORS**
- Zero gravity phase separator technologies - Past, present and future  
[SAE PAPER 921160] p 293 A93-41342
- A novel membrane device for the removal of water vapor and water droplets from air  
[SAE PAPER 921322] p 304 A93-41484
- SEQUENCING**
- Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels  
[DE93-007815] p 246 N93-26587
- SEROTONIN**
- Reaction characteristics of several neuroregulating systems of cosmonauts after a 366-day-long space flight  
p 45 A93-15167
- Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat  
p 151 A93-26500
- Tryptophan availability modulates serotonin release from rat hypothalamic slices  
p 152 A93-27000
- Effect of chronic D-fenfluramine administration on rat hypothalamic serotonin levels and release  
p 152 A93-27049
- Serotonin release varies with brain tryptophan levels  
p 201 A93-32119
- Persistent blockade of potassium-evoked serotonin release from rat frontocortical terminals after fluoxetine administration  
p 202 A93-32125
- Effects of their nutrient precursors on the synthesis and release of serotonin, the catecholamines, and acetylcholine - Implications for behavioral disorders  
p 204 A93-33033
- 8-OH-DPAT does not interfere with habituation to motion-induced emesis in cats  
p 271 A93-38451
- The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions  
p 324 A93-43034
- Physiological analyses of the afferents controlling brain neurochemical systems  
[AD-A253185] p 14 N93-11146
- Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms  
[AD-A259803] p 217 N93-23459
- Molecular approach to hypothalamic rhythms  
[AD-A264438] p 335 N93-30421
- SERUMS**
- Atomic structure and chemistry of human serum albumin  
p 200 A93-31628
- Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period  
p 22 N93-11318
- Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] p 276 N93-28952
- Lipidemic profile of Hellenic Airforce officers  
p 362 N93-32250
- Correlation of life-style and dietary concomitants of Greek pilots with serum analytes  
p 369 N93-32256
- SERVICE LIFE**
- Regenerable biocide delivery unit, volume 1  
[NASA-CR-185701-VOL-1] p 274 N93-27122
- SERVOCONTROL**
- A manipulator control testbed - Implementation and applications  
[AAS PAPER 92-054] p 392 A93-50594
- SEX**
- The earliest fossil evidence for sexual dimorphism in primates  
p 152 A93-27775
- SEX FACTOR**
- Comparing the Cattell 16PF profiles of male and female commercial airline pilots  
p 178 A93-27177
- An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine  
[AD-A265497] p 360 N93-31917
- SHAPES**
- Up/down in (im)possible flight attitude indicators - Some effects of colour, shape and pattern  
p 185 A93-27128
- Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size  
p 224 A93-32788
- Modeling clothed figures  
[AD-A257037] p 71 N93-15363
- Optimal design of composite hip implants using NASA technology  
p 174 N93-22188
- Sensory sensitivities and discriminations and their roles in aviation  
[AD-A259742] p 224 N93-23479
- Shape optimization of tibial prosthesis components  
[NASA-CR-191123] p 246 N93-27085
- Methods for characterizing the human head for the design of helmets  
[AD-A263875] p 353 N93-29889
- Representations of shape in object recognition and long-term visual memory  
[AD-A264342] p 341 N93-30163
- SHEAR STRESS**
- Wall shear stress estimates in coronary artery constrictions  
p 170 A93-28759
- SHEEP**
- Joint HVAC transmission EMF environmental study  
[DE92-017663] p 43 N93-15211
- SHIVERING**
- Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats  
p 75 A93-18039



## SHOCK (PHYSIOLOGY)

### SHOCK (PHYSIOLOGY)

A study of human brain somatosensory evoked potential and its application to man-machine-environment system engineering - Preliminary exploration of SEP in normal adult p 12 A93-13719

Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronectin p 47 A93-16157

Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin [AD-A258185] p 120 A93-17900

### SHOCK ABSORBERS

Wheels for wheelchairs and the like [NASA-CASE-MFS-28632-1] p 106 A93-17042

Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station [NASA-CR-192015] p 139 A93-17973

### SHOES

Suction-cup shoes for astronauts - A new method of foot restraint p 62 A93-17072

### SHOULDERS

Development of a 500 hPa shoulder joint for the European EVA Space Suit System [SAE PAPER 921257] p 299 A93-41427

### SHROUDS

Bright light delivery system [NASA-CASE-MFS-28723-1] p 96 A93-17058

### SICKNESSES

Simulator sickness experience in simulators equipped with fiber optic helmet mounted display systems [AIAA PAPER 92-4135] p 136 A93-24490

A study of illness related lost time in transport aircraft crewmembers [AD-A258193] p 132 A93-18298

### SIGNAL ANALYSIS

A toposcopic investigation of brain electrical activity induced by motion sickness [AD-A259024] p 124 A93-18952

G-load effects and efficient acoustic parameters for robust speaker recognition p 146 A93-19775

### SIGNAL DETECTION

Auditory perception [AD-A255061] p 23 A93-12469

Increased fire and toxic contaminant detection responsibility by use of distributed, aspirating sensors p 311 A93-27722

Theory of signal detection and its application to visual target acquisition: A review of the literature [AD-A262920] p 288 A93-28307

Auditory spectro-temporal pattern analysis [AD-A264691] p 361 A93-31981

### SIGNAL PROCESSING

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 A93-15825

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191807] p 110 A93-16709

Control system and method for prosthetic devices [NASA-CASE-MSC-21941-1] p 106 A93-17087

Automated system for analyzing the activity of individual neurons p 173 A93-22163

Programmable interactive system for cochlear implant electrode stimulation [AD-A262558] p 333 A93-29421

Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 A93-30594

### SIGNS AND SYMPTOMS

Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153

Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697

Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435

Phenytin as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162

Motion and space sickness [ISBN 0-8493-4703-3] p 402 A93-55929

Physiology of motion sickness symptoms p 403 A93-55939

Space motion sickness monitoring experiment - Spacelab 1 p 403 A93-55941

Simulator sickness p 403 A93-55944

Early markers of HIV infection and subclinical disease progression p 17 A93-11296

The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 A93-11312

Phadiatop: A screening test for inhalant allergy p 21 A93-11313

Allergic and nonallergic rhinitis in Greek pilots p 21 A93-11317

Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients [NASA-CR-192382] p 172 A93-20736

Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m [DLR-FB-92-14] p 219 A93-24093

The Environmental Symptoms Questionnaire (ESQ): Development and application [AD-A264127] p 335 A93-30196

### SILICATES

Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824

### SIMILARITY THEOREM

Spectral analysis of visual symbols p 30 A93-13718

### SIMPLIFICATION

Stimulus presentation formats and measurement techniques for the quantification of target detection performance [AD-A258933] p 133 A93-19449

Interpretation as abduction [AD-A259608] p 225 A93-24227

### SIMULATION

Synthetic experience - A proposed taxonomy p 390 A93-49398

The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 A93-19705

Training high performance skills using above real-time training [NASA-CR-192616] p 225 A93-24192

### SIMULATORS

Simulator sickness experience in simulators equipped with fiber optic helmet mounted display systems [AIAA PAPER 92-4135] p 136 A93-24490

Training high performance skills using above real-time training [NASA-CR-192616] p 225 A93-24192

Programmable interactive system for cochlear implant electrode stimulation [AD-A262558] p 333 A93-29421

Exercise/recreation facility for a lunar or Mars analog p 352 A93-29733

### SITTING POSITION

Passive zero-gravity leg restraint [NASA-CASE-ARC-11882-1-CU] p 70 A93-14713

Portable seat lift [NASA-CASE-MFS-28610-1] p 106 A93-17045

Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 A93-32237

### SIZE (DIMENSIONS)

Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size p 224 A93-32788

Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988 [AD-A260869] p 265 A93-25628

### SKIN (ANATOMY)

Effects of positive acceleration on the microcirculation of rabbit conjunctiva, mesentery, skin, and pia mater p 4 A93-13709

Experimental study of volatile metabolites of human body p 11 A93-13711

Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074

Skin care in the space environment p 170 A93-28756

Dermal exposure assessment: Principles and applications [PB92-205665] p 12 A93-10438

### SKIN TEMPERATURE (BIOLOGY)

Thermal convergence fails to predict heat tolerance limits p 8 A93-10331

The values of the skin-temperature gradients and their significance for thermoregulation p 9 A93-12862

Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729

### SKULL

First skulls of the early Eocene primate Shoshonius cooperi and the anthropoid-tarsier dichotomy p 202 A93-32670

### SLEEP

Sleep as a restorative process under extreme conditions p 89 A93-18291

Determinants of poststimulus potentiation in humans during NREM sleep p 78 A93-20034

Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658

Sleep and circadian rhythms p 94 A93-20659

Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage p 111 A93-23074

Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276

Flight crew sleep during multiple layover polar flights p 380 A93-49226

Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569

NASA Space Human Factors Program [NASA-TM-108005] p 31 A93-10890

Sleep inertia: Is there a worst time to wake up? [AD-A256602] p 52 A93-14240

C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 A93-32265

The effects of cockpit heat on aviator sleep parameters p 371 A93-32266

Human factors and the safety of flights: The importance of the management of sleep p 371 A93-32267

### SLEEP DEPRIVATION

Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658

Sleep and circadian rhythms p 94 A93-20659

Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870

Effects of sleep deprivation and exercise on glucose tolerance p 281 A93-41165

Sleep inertia: Is there a worst time to wake up? [AD-A256602] p 52 A93-14240

The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness [AD-A263033] p 283 A93-27923

### SMART STRUCTURES

Intelligent virtual interfaces for telerobotics p 193 A93-29136

### SMOKE

Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 A93-11318

Survey of smoking habits in the Spanish Air Force p 370 A93-32262

### SMOKE DETECTORS

Increased fire and toxic contaminant detection responsibility by use of distributed, aspirating sensors p 311 A93-27722

### SNAILS

CELSS nutrition system utilizing snails p 394 A93-52411

### SOCIAL FACTORS

Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 A93-11299

Communicable diseases: A major burden of morbidity and mortality p 18 A93-11300

The lunar community church: Contributions to lunar living and to evolution of ethical and spiritual thinking p 57 A93-14020

Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments p 99 A93-16801

### SOCIAL ISOLATION

Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495

Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments p 99 A93-16801

### SODIUM

Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332

Effect of DL-DOPA, L-5-HTP and pentobarbital sodium on brain encephalofluorographs in rats p 2 A93-13530

### SODIUM CHLORIDES

The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686

Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688

Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557

### SODIUM COMPOUNDS

Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate p 214 A93-32120

### SOFTWARE ENGINEERING

A software for testing human's ability to trouble-shoot in the condition of multitask p 29 A93-13537

Directory of design support methods [AD-A256987] p 104 A93-16258

- Flight above a virtual world p 145 N93-19766  
User areas in aircraft cockpit, using methods of rapid prototype development  
[MBS-FE-315-S-PUB-0493] p 196 N93-22389  
The CELSS advanced automation project evolution and technology assessment p 312 N93-27723
- SOFTWARE TOOLS**  
Human performance data visualization for system design teams p 348 A93-42840  
Distributed environmental control p 32 N93-11924  
Habitat automation p 33 N93-11976
- SOIL SCIENCE**  
Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] p 114 N93-19054
- SOILS**  
Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] p 114 N93-19054
- SOLAR COSMIC RAYS**  
Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223
- SOLAR FLARES**  
Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- SOLAR PROTONS**  
Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073  
Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- SOLAR RADIATION**  
Phytoplankton photosynthesis in natural mixed layers [AD-A255010] p 39 N93-12871
- SOLAR RADIATION SHIELDING**  
Radiation exposure predictions for short-duration stay Mars missions  
[AAS PAPER 92-107] p 277 A93-39261
- SOLAR SYSTEM**  
Dark matter in the solar system - Hydrogen cyanide polymers p 110 A93-17987  
Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408  
Space migrations: Anthropology and the humanization of space p 105 N93-16862  
Exobiology in Solar System Exploration  
[NASA-SP-512] p 112 N93-18545  
Overview: Exobiology in solar system exploration p 112 N93-18546  
The solar system: Importance of research to the biological sciences p 113 N93-18547
- SOLID WASTES**  
Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management  
[SAE PAPER 921119] p 290 A93-41311  
Test of the Shuttle Extended Duration Orbiter (EDO) Waste Collection Subsystem (WCS)  
[SAE PAPER 921346] p 305 A93-41505  
Incineration for resource recovery in a closed ecological life support system p 409 A93-54826  
Alternative processes for water reclamation and solid waste processing in a physical/chemical bioregenerative life support system p 311 N93-27721
- SOLUBILITY**  
Characterization of the water soluble component of inedible residue from candidate CELSS crops  
[NASA-TM-107557] p 139 N93-18111
- SONAR**  
Stimulus presentation formats and measurement techniques for the quantification of target detection performance  
[AD-A258933] p 133 N93-19449
- SORBENTS**  
Development of a regenerable metal oxide sheet matrix CO2 removal system  
[SAE PAPER 921298] p 302 A93-41463
- SORPTION**  
Use of sorption technology for treatment of humidity condensate for potable water  
[SAE PAPER 921312] p 303 A93-41474
- SOUND FIELDS**  
Perceptual effects of synthetic reverberation on three-dimensional audio systems p 257 A93-36583
- SOUND LOCALIZATION**  
AUDIMIR - Directional hearing at microgravity p 159 A93-26570  
Headphone localization of speech p 394 A93-52507  
Super auditory localization for improved human-machine interfaces  
[AD-A254699] p 34 N93-12229
- SOUND PRESSURE**  
Measurement and evaluation of blast overpressure during F-15A crew station vulnerability assessment test  
[AD-A257152] p 104 N93-16033

**SOURCE PROGRAMS**

- Regenerable biocide delivery unit, volume 2  
[NASA-CR-185701-VOL-2] p 275 N93-27360

**SOYBEANS**

- Crop growth and associated life support for a lunar farm p 67 N93-13994

**SPACE ADAPTATION SYNDROME**

- First intramuscular administration in the U.S. space program --- of motion sickness drugs p 84 A93-17534  
Pharmacologic considerations for Shuttle astronauts p 85 A93-17537  
New pharmacologic approaches to the prevention of space/motion sickness p 85 A93-17538  
Cardiovascular adaptation to spaceflight p 86 A93-17550

- Cerebral blood flow - Comparison of ground-based and spaceflight data and correlation with space adaptation syndrome p 87 A93-17553  
NASA plans and opportunities --- space flight activities throughout the 1990s p 79 A93-20652  
Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space p 130 A93-25207

- COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569  
OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571  
Effects of long-term weightlessness on roll circarvection p 279 A93-39725  
Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773  
Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122

- Habituation to feline motion sickness p 328 A93-44900  
The psychosocial adaptation of children in space - A speculation p 388 A93-50338  
Adaptation to transient postural perturbations  
[NASA-CR-190959] p 105 N93-16699

- SPACE BASES**  
The real world and lunar base activation scenarios p 68 N93-14014

- SPACE COLONIES**  
K.E. Tsiolkovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409  
The psychosocial adaptation of children in space - A speculation p 388 A93-50338  
Habitat automation p 33 N93-11976  
The real world and lunar base activation scenarios p 68 N93-14014

- SPACE COMMERCIALIZATION**  
Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780  
Commercial opportunities in bioseparations and physiological testing aboard Space Station Freedom p 206 N93-22649

- SPACE DEBRIS**  
Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems  
[SAE PAPER 921258] p 299 A93-41428  
Space Shuttle crew compartment debris-contamination  
[SAE PAPER 921345] p 305 A93-41504

- SPACE ENVIRONMENT SIMULATION**  
Response of the circadian system to 6 deg head-down tilt bed rest p 117 A93-24045  
The problem of oxygen regimen in extreme conditions p 160 A93-27685  
Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280  
Metabolic responses to simulated extravehicular activity  
[SAE PAPER 921303] p 282 A93-41468

- Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408  
Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458  
Design of a radiator shade for testing in a simulated lunar environment  
[NASA-CR-192080] p 108 N93-17710

- SPACE ERECTABLE STRUCTURES**  
SHARC: Space Habitat, Assembly and Repair Center  
[NASA-CR-192031] p 140 N93-18153  
A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849

- SPACE EXPLORATION**  
Smart space suits for space exploration p 28 A93-12078  
Supporting human exploration in space - Biomedical research p 48 A93-17428

- Controlled Ecological Life Support System (CELSS) modeling p 137 A93-25308

- Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309

- Future needs for space robots for SEI --- Space Exploration Initiative p 182 A93-27002  
Human factor considerations for the First Lunar Outpost p 223 A93-30928

- Shielding strategies for human exploration missions [SAE PAPER 921376] p 308 A93-41534  
Regenerative life support technology challenges for the Space Exploration Initiative p 346 A93-42128  
Remote medical systems for the human exploration of space p 401 A93-54309

- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366) [NASA-SP-7011(366)] p 12 N93-10079  
Assessment of programs in space biology and medicine  
[NASA-CR-190930] p 41 N93-13327  
NASA/NSF Antarctic Science Working Group p 81 N93-16802

- Space migrations: Anthropology and the humanization of space p 105 N93-16862  
Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5  
[NASA-CR-192042] p 140 N93-18156  
Exobiology in Solar System Exploration  
[NASA-SP-512] p 112 N93-18545  
Overview: Exobiology in solar system exploration p 112 N93-18546

- Assessment of the state of the art in life support environmental control for SEI p 315 N93-27978

- SPACE FLIGHT**  
A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935  
Effect of hypergravity on astronauts in space flight p 48 A93-16254

- Cardiovascular physiology in space flight p 93 A93-20654  
Can the adult skeleton recover lost bone? p 93 A93-20656  
The mechanical control system of bone in weightless spaceflight and in aging p 94 A93-20657  
Cytokine secretion by immune cells in space p 153 A93-28694

- Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706  
Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight p 272 A93-40548  
Effects of spaceflight on the proliferation of jejunal mucosal cells  
[NASA-CR-191303] p 51 N93-13449

- Long-duration isolation and confinement: Human factors issues and research requirements p 100 N93-16808  
Physiological experiments within the project AustroMir p 219 N93-24354  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367  
Influence of microgravity on immune system and genetic information p 220 N93-24370  
Armstrong Laboratory space visual function tester program p 284 N93-28739

- SPACE FLIGHT FEEDING**  
Some features characterizing the supply of astronauts with vitamins C, B1, B2, and B6 during nourishment from canned-food rations on long-term space flights p 249 A93-35231  
Space Station Freedom food management  
[SAE PAPER 921248] p 298 A93-41419  
Review of the space medico-engineering research in China  
[AAS PAPER 91-623] p 402 A93-55802

- A proposal to demonstrate production of salad crops in the Space Station Mockup Facility with particular attention to space, energy, and labor constraints  
[NASA-CR-192815] p 209 N93-23169

- SPACE FLIGHT STRESS**  
Reaction characteristics of several neuroregulating systems of cosmonauts after a 366-day-long space flight p 45 A93-15167  
The cardiovascular system p 46 A93-15530  
Metabolic changes observed in astronauts p 84 A93-17535

- Drug effects on orthostatic intolerance induced by bedrest p 86 A93-17544  
Altered cell function in microgravity p 79 A93-20660  
The pituitary - Aging and spaceflown rats p 79 A93-20661  
Cellular immunosenescence - An overview p 80 A93-20663

- Immune response during space flight  
     Caenorhabditis elegans - A model system for space biology studies p 94 A93-20664  
     The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652  
     AUDIMIR - Directional hearing at microgravity p 159 A93-26570  
     Effects of antiothostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693  
     Variable lymphocyte responses in rats after space flight p 154 A93-28704  
     Alteration in human mononuclear leucocytes following space flight p 165 A93-28705  
     Vestibular problems in diving and in space p 169 A93-28747  
     Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750  
     Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435  
     Influence of space-flight factors on growth of spirulina p 199 A93-30441  
     Cardiovascular problems during space flight p 213 A93-30445  
     Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545  
     Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207  
     Lipid peroxidation and the antioxidant defense system in rats after a 13-day flight on the Cosmos-1887 biosatellite p 239 A93-35210  
     Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254  
     Some indices of humoral immunity in Rhesus monkeys under the effect of extreme space flight factors p 241 A93-35258  
     Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179  
     Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935  
     Effect of spaceflight on human protein metabolism p 360 A93-47097  
     Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568  
     Space and cognition - The measurement of behavioral functions during a 6-day space mission p 405 A93-55164  
     Endocrinology of space/motion sickness p 403 A93-55935  
     Space motion sickness monitoring experiment - Spacelab I p 403 A93-55941  
     Adaptation to the simulated stimulus rearrangement of weightlessness p 403 A93-55942  
     Statistical prediction of space motion sickness p 403 A93-55943  
     DoD space radiation concerns [AD-A253135] p 13 A93-10613  
     NASA Space Human Factors Program [NASA-TM-108005] p 31 A93-10890  
     Space flight and immune system p 14 A93-11284  
     Cognitive and affective components of mental workload: Understanding the effects of each on human decision making behavior p 99 A93-16783
- SPACE HABITATS**  
     Human factor considerations for the First Lunar Outpost [AIAA PAPER 93-1014] p 223 A93-30928  
     Recycling and source reduction for long duration space habitation [SAE PAPER 921121] p 290 A93-41313  
     Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight [SAE PAPER 921232] p 297 A93-41406  
     Human habitat design for the Space Exploration Initiative p 344 A93-41978  
     Lunar habitats - Places for people p 344 A93-41991  
     Lunar base requirements for human habitability p 345 A93-41995  
     Space habitat contaminant growth models. II p 345 A93-42094  
     An operational evaluation process for long-duration mission habitats in space p 345 A93-42114  
     Lunar base pressure, O<sub>2</sub> fraction, and ExtraHabitat Activity suit design p 346 A93-42125  
     Space habitat environmental health - A systems issue p 347 A93-42151
- Life support and self-sufficiency in space communities p 105 A93-16866  
     Human safety in the lunar environment p 105 A93-16867  
     Inflatable habitation for the lunar base p 106 A93-17442  
     Prefabricated foldable lunar base modular systems for habitats, offices, and laboratories p 106 A93-17444  
     Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 A93-17448  
     Automation of closed environments in space for human comfort and safety [NASA-CR-192045] p 138 A93-17971  
     Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 A93-18018  
     Conceptual design of a thermal control system for an inflatable lunar habitat module [NASA-CR-192014] p 140 A93-18113  
     SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 A93-18153  
     Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 A93-18156  
     SPE water electrolyzers in support of the lunar outpost p 315 A93-27977  
     Conceptual study on manned lunar surface site p 316 A93-28029  
     Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 A93-28032  
     Lunar surface experiment system p 316 A93-28034  
     Selenia: A habitability study for the development of a third generation lunar base p 352 A93-29748
- SPACE LABORATORIES**  
     Microgravity flight testing of a laboratory robot [AAS PAPER 91-035] p 62 A93-15583  
     EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory p 231 A93-31522
- SPACE LAW**  
     The province and heritage of mankind reconsidered: A new beginning p 69 A93-14018
- SPACE LOGISTICS**  
     Habitat automation p 33 A93-11976
- SPACE MISSIONS**  
     NASA plans and opportunities --- space flight activities throughout the 1990s p 79 A93-20652  
     Engineering verification of the biomass production chamber p 67 A93-13996  
     Nutrition p 81 A93-16805  
     Exobiology in Solar System Exploration [NASA-SP-512] p 112 A93-18545  
     Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 A93-19399  
     Selection of astronauts for European space missions p 225 A93-24345  
     Space life support technology applications to terrestrial environmental problems p 265 A93-25617  
     Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model p 245 A93-26069  
     Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 A93-29502
- SPACE ORIENTATION**  
     Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694
- SPACE PERCEPTION**  
     Anisotropy in an ambiguous kinetic depth effect p 55 A93-14097  
     Human vestibular function and weightlessness p 84 A93-17531  
     Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays p 102 A93-19987  
     Spatial judgments with monoscopic and stereoscopic presentation of perspective displays p 102 A93-19988  
     Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870  
     Prospective assessment of stereoscopic visual status and USAF pilot training attrition p 116 A93-24039  
     AUDIMIR - Directional hearing at microgravity p 159 A93-26570  
     Spatial orientation and dynamics in virtual reality systems - Lessons from flight simulation p 177 A93-27185  
     Exocentric judgements in real environments and stereoscopic displays p 189 A93-27190  
     Influence of animation on dynamical judgments p 180 A93-28692  
     Predicting individual differences in complex skill acquisition - Dynamics of ability determinants p 181 A93-28731  
     Factors that affect depth perception in stereoscopic displays p 230 A93-30455  
     Human stereopsis p 223 A93-30456
- Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446  
     The impact of visual noise on spatial orientation p 257 A93-36229  
     Spatial orientation in weightless environments p 388 A93-49563  
     Multistage integration model for human egomotion perception [AIAA PAPER 93-3564] p 406 A93-52664  
     3-D target designation using two control devices and an aiding technique --- in fighter cockpits p 408 A93-53120  
     User evaluation of a stereoscopic display for space training applications p 408 A93-53123  
     Eye movements and visual information processing [AD-A250198] p 24 A93-10278  
     Psychophysical analyses of perceptual representations [AD-A255432] p 58 A93-14510  
     Neural basis of motion perception [AD-A261452] p 260 A93-26349  
     Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 A93-28857  
     The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 A93-31237
- SPACE PLATFORMS**  
     An operator interface design for a telerobotic inspection system [AIAA PAPER 93-1160] p 231 A93-31034  
     Recovering potable water from wastewater in space platforms by lyophilization [SAE PAPER 921323] p 304 A93-41485  
     Remote surface inspection system --- of large space platforms p 410 A93-55469
- SPACE POWER REACTORS**  
     Man-machine interface issues for space nuclear power systems p 60 A93-13907
- SPACE PROCESSING**  
     Distribution of human waste samples in relation to sizing waste processing in space p 68 A93-14001  
     Commercial opportunities in bioseparations and physiological testing aboard Space Station Freedom p 206 A93-22649  
     Materials dispersion and biodynamics project research p 207 A93-22651
- SPACE PSYCHOLOGY**  
     Human factor considerations for the First Lunar Outpost [AIAA PAPER 93-1014] p 223 A93-30928  
     Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780  
     The psychological challenge of space p 339 A93-42658  
     The psychosocial adaptation of children in space - A speculation p 388 A93-50338
- SPACE RATIONS**  
     Some features characterizing the supply of astronauts with vitamins C, B1, B2, and B6 during nourishment from canned-food rations on long-term space flights p 249 A93-35231
- SPACE SHUTTLE MISSION 31-D**  
     Electroretinography and audio potentials in space flight p 9 A93-11675
- SPACE SHUTTLE MISSIONS**  
     Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712  
     Operational space human factors - Methodology for a DSO --- Detailed Supplementary Objective for manned Shuttle Orbiter missions [SAE PAPER 921156] p 293 A93-41339  
     STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission [NASA-TM-108034] p 80 A93-15823  
     Immunology presentation at the 1990 NASA/NSF Antarctica Biomedical Science Working Group p 81 A93-16806  
     Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1) p 284 A93-28740  
     Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2) p 284 A93-28741
- SPACE SHUTTLE ORBITERS**  
     Space robotics and its man-machine interface p 27 A93-11204  
     The Servicing Aid Tool --- teleoperated manipulation system for space shuttle orbiters p 192 A93-29116  
     Test of the Shuttle Extended Duration Orbiter (EDO) Waste Collection Subsystem (WCS) [SAE PAPER 921346] p 305 A93-41505  
     Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements [SAE PAPER 921347] p 305 A93-41506

## SUBJECT INDEX

Shuttle Orbiter Environmental Control and Life Support System - Flight experience  
[SAE PAPER 921348] p 305 A93-41507

Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress  
[AD-A258552] p 148 N93-19955

### SPACE SHUTTLE PAYLOADS

Flight Telerobotic Servicer legacy  
[AIAA PAPER 93-1157] p 231 A93-31032

### SPACE SHUTTLES

Active vibration damping of the Space Shuttle remote manipulator system p 231 A93-31993

A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests  
[SAE PAPER 921154] p 293 A93-41337

Design of a Shuttle air and water prefilter for reduced gravity operation  
[SAE PAPER 921161] p 294 A93-41343

NASA's manned space flight program  
[AAS PAPER 91-626] p 402 A93-55805

Design of a resistive exercise device for use on the Space Shuttle  
[NASA-CR-192079] p 108 N93-17805

Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle  
[NASA-CR-192021] p 138 N93-17970

An on-orbit viewpoint of life sciences research p 206 N93-22629

### SPACE STATION FREEDOM

Space telerobotic research and applications at Space Systems/Loral  
[AAS PAPER 91-046] p 62 A93-15588

Operational medicine on the lunar base p 48 A93-17430

Space medicine - Answering the challenge p 87 A93-17552

The Space Station Remote Manipulator System p 138 A93-25487

Task-analytic evaluations of Space Station Freedom workstations p 187 A93-27157

Selecting Space Station Freedom hardware p 188 A93-27184

Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188

Ground operation of the mobile servicing system on Space Station Freedom p 190 A93-29107

Knowledge-based task planning for the Special Purpose Dexterous Manipulator p 191 A93-29110

Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277

Limitations to the study of man in space in the U.S. space program p 213 A93-30285

Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues  
[AIAA PAPER 93-1156] p 230 A93-31031

Ground-based control of Space Station Freedom-based robots p 263 A93-35570

Space Station Water Processor - Current flight design  
[SAE PAPER 921112] p 289 A93-41306

Space Station Freedom Environmental Health Care Program  
[SAE PAPER 921138] p 292 A93-41325

Glovebox design for Space Station Freedom Crew Health Care System p 292 A93-41326

Program development for exercise countermeasures  
[SAE PAPER 921140] p 292 A93-41327

Hyperbaric treatment operations aboard Space Station Freedom  
[SAE PAPER 921142] p 292 A93-41328

The development of an atmosphere composition monitor for the Environmental Control and Life Support System  
[SAE PAPER 921149] p 292 A93-41333

Oxygen generation by static feedwater electrolysis for Space Station Freedom  
[SAE PAPER 921151] p 293 A93-41335

The Centrifuge Facility Life Sciences Glovebox configuration study  
[SAE PAPER 921158] p 293 A93-41341

Two phase fluid management for hydroponics  
[SAE PAPER 921163] p 294 A93-41345

Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF)  
[SAE PAPER 921186] p 294 A93-41365

Development of the carbon dioxide removal system blower used on Space Station Freedom  
[SAE PAPER 921188] p 294 A93-41367

Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture  
[SAE PAPER 921193] p 295 A93-41371

A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization  
[SAE PAPER 921210] p 295 A93-41386

Microbiology operations and facilities aboard restructured Space Station Freedom  
[SAE PAPER 921213] p 296 A93-41389

Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom  
[SAE PAPER 921216] p 296 A93-41392

Dew point analysis for Space Station Freedom  
[SAE PAPER 921227] p 296 A93-41401

Comparative test data assessment and simplified math modelling for Sabatier CO<sub>2</sub> reduction subsystem  
[SAE PAPER 921228] p 296 A93-41402

Simplified analysis of water distribution for Space Station Freedom  
[SAE PAPER 921230] p 296 A93-41404

Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations  
[SAE PAPER 921231] p 297 A93-41405

The effects of a reduced pressure scenario on the Columbus APM environmental control system  
[SAE PAPER 921247] p 298 A93-41418

Space Station Freedom food management  
[SAE PAPER 921248] p 298 A93-41419

Crew Health Care Systems installations for Space Station Freedom  
[SAE PAPER 921249] p 298 A93-41420

Continuous monitoring of effluent iodine levels of Space Station water using solid state technology  
[SAE PAPER 921265] p 299 A93-41435

Measurement of free and dissolved gas content of water samples on Space Station Freedom  
[SAE PAPER 921267] p 300 A93-41437

Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water  
[SAE PAPER 921268] p 300 A93-41438

The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test  
[SAE PAPER 921269] p 300 A93-41439

The application of filtration technology within the Water Processor on board Space Station Freedom  
[SAE PAPER 921270] p 300 A93-41440

Use of sorption technology for treatment of humidity condensate for potable water  
[SAE PAPER 921312] p 303 A93-41474

Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate  
[SAE PAPER 921313] p 303 A93-41475

Performance evaluation of candidate space suit elements for the next generation orbital EMU  
[SAE PAPER 921344] p 305 A93-41503

Space Station Condensing Heat Exchanger biofilm formation and control evaluation  
[SAE PAPER 921383] p 308 A93-41541

Defining contamination control requirements for non-human research on Space Station Freedom  
[SAE PAPER 921386] p 308 A93-41544

Dark cycle monitoring of biological specimens on Space Station Freedom  
[SAE PAPER 921393] p 274 A93-41551

The role of Environmental Health System air quality monitors in Space Station Contingency Operations  
[SAE PAPER 921414] p 310 A93-41565

EVA operational guidelines and considerations for use during the Space Station Freedom design review process p 345 A93-42119

Space Station and lunar/Mars life support research p 346 A93-42122

Space Station Freedom payload operations in the 21st century p 350 A93-45436

An on-line water quality monitor for Space Station Freedom p 364 A93-46801

Ground-remote control for space station telerobotics with time delay  
[AAS PAPER 92-052] p 392 A93-50592

NASA's manned space flight program  
[AAS PAPER 91-626] p 402 A93-55805

Intelligent fault management for the Space Station active thermal control system p 32 N93-11930

Microbiological methods for the water recovery systems test, revision 1.1  
[NASA-CR-184390] p 64 N93-12966

Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780

Radiological assessment for Space Station Freedom  
[NASA-TM-104758] p 128 N93-20303

Environmental health discipline science plan  
[NASA-TM-108042] p 173 N93-21369

Space human factors discipline science plan  
[NASA-TM-108023] p 194 N93-21370

Space Station ECLSS integration analysis  
[NASA-CR-192470] p 195 N93-22002

Life sciences utilization of Space Station Freedom p 205 N93-22622

Life sciences recruitment objectives p 205 N93-22623

Biomedical Monitoring and Countermeasures Facility p 205 N93-22624

Gravitational Biology Facility on Space Station: Meeting the needs of space biology p 206 N93-22625

Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628

Crew health p 217 N93-22630

Zero-G life support for Space Station Freedom p 233 N93-22640

Commercial opportunities in bioseparations and physiological testing aboard Space Station Freedom p 206 N93-22649

Materials dispersion and biodynamics project research p 207 N93-22651

A proposal to demonstrate production of salad crops in the Space Station Mockup Facility with particular attention to space, energy, and labor constraints  
[NASA-CR-192815] p 209 N93-23169

Space biology research development  
[NASA-CR-192830] p 244 N93-25242

Advanced life support study. Modification 10: ECLSS logistical support analysis for Space Station Freedom  
[NASA-CR-192481] p 266 N93-25888

Regenerable biocide delivery unit, volume 1  
[NASA-CR-185701-VOL-1] p 274 N93-27122

Environmental control and life support system evolution p 311 N93-27719

Technologies for ECLSS evolution p 311 N93-27720

Alternative processes for water reclamation and solid waste processing in a physical/chemical bioregenerative life support system p 311 N93-27721

The ECLSS advanced automation project evolution and technology assessment p 312 N93-27723

Marshall Space Flight Center ECLSS technology activities p 312 N93-27724

JSC ECLSS R/T program overview p 312 N93-27725

Extravehicular activity system p 312 N93-27787

Man-systems distributed system for Space Station Freedom p 312 N93-27788

Evolution of Space Station EMU PLSS technology recommendations p 312 N93-27790

Simplified Aid For Crew Rescue (SAFR) p 313 N93-27793

Evolving technologies for Space Station Freedom computer-based workstations p 313 N93-27794

Environmental control and life support systems p 314 N93-27858

Extravehicular activity technology discipline p 314 N93-27859

Manned systems technology discipline p 314 N93-27860

Automation of closed environments in space for human comfort and safety p 352 N93-29734

Hyperbaric treatment p 360 N93-31454

Health maintenance facility system effectiveness testing  
[NASA-TM-104737] p 372 N93-32328

Microbiological and corrosion analysis of three urine pretreatment regimes with titanium 6Al-4V  
[NASA-CR-192575] p 372 N93-32356

### SPACE STATION PAYLOADS

Teleprogramming a cooperative space robotic workcell for Space Station p 190 A93-29109

Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517

The Biological Flight Research Facility p 239 A93-34581

Defining contamination control requirements for non-human research on Space Station Freedom  
[SAE PAPER 921386] p 308 A93-41544

Space Station Freedom payload operations in the 21st century p 350 A93-45436

Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780

Columbus payload requirements in human physiology p 220 N93-24386

Environmental control and life support system evolution p 311 N93-27719

### SPACE STATIONS

Contribution of psychiatry to life in space p 56 A93-15529

NASA plans and opportunities --- space flight activities throughout the 1990s p 79 A93-20652

The psychological effects of isolation on a space station  
- A simulation study  
[SAE PAPER 921191] p 287 A93-41369  
Biodegradation of materials in water reclamation systems  
[SAE PAPER 921311] p 303 A93-41473  
Telerobot control mode performance assessment  
[AAS PAPER 92-053] p 392 A93-50593  
A health care system for the Space Station  
[NASA-TM-108093] p 65 N93-13571  
Conceptual design of a lunar base thermal control system  
p 68 N93-14003  
Applications of living systems theory to life in space  
p 105 N93-16865  
An on-orbit viewpoint of life sciences research  
p 206 N93-22629  
Architecture of autonomous systems  
[NASA-CR-192974] p 266 N93-26047  
The role of pyridoxine as a countermeasure for in-flight loss of lean body mass  
p 255 N93-26068  
Environmental control and life support system  
p 311 N93-27718  
Increased fire and toxic contaminant detection responsibility by use of distributed, aspirating sensors  
p 311 N93-27722  
SPE water electrolyzers in support of the lunar outpost  
p 315 N93-27977

**SPACE SUITS**

Smart space suits for space exploration  
p 28 A93-12078  
Experimental research of the temperature and humidity control system for manned spacecraft cabin  
p 10 A93-13529  
For space suits - The multifunction pressure reducer-regulator of Intertechnique  
p 61 A93-15057  
Skin temperature and heat flow of head-neck region under different ambient temperatures  
p 46 A93-16074  
Ultrasonic location of gas bubbles in the vascular bed of a person working in a space suit  
p 262 A93-35239  
A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests  
[SAE PAPER 921154] p 293 A93-41337  
Development of the Hermes EVA Space Suit Glove  
[SAE PAPER 921256] p 299 A93-41426  
Development of a 500 hPa shoulder joint for the European EVA Space Suit System  
[SAE PAPER 921257] p 299 A93-41427  
Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems  
[SAE PAPER 921258] p 299 A93-41428  
Metabolic responses to simulated extravehicular activity  
[SAE PAPER 921303] p 282 A93-41468  
Performance evaluation of candidate space suit elements for the next generation orbital EMU  
[SAE PAPER 921344] p 305 A93-41503  
Mitigation of dust contamination during EVA operations on the moon and Mars  
p 345 A93-42107  
Lunar base pressure, O<sub>2</sub> fraction, and ExtraHabitat Activity suit design  
p 346 A93-42125  
Suited for spacewalking: A teacher's guide with activities  
[NASA-EP-279] p 65 N93-13692  
A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population  
[NASA-TP-3286] p 96 N93-16619  
Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition  
[NASA-TP-3297] p 149 N93-20319

**SPACE TOOLS**

Microgravity flight testing of a laboratory robot  
[AAS PAPER 91-035] p 62 A93-15583  
Space telerobotic research and applications at Space Systems/Loral  
[AAS PAPER 91-046] p 62 A93-15588  
Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms  
p 101 A93-18710  
Research and development of sensing and manipulation techniques for space robotics on a testbed  
[AIAA PAPER 93-0794] p 136 A93-24873  
Cooperative intelligent robotics in space III; Proceedings of the Meeting, Boston, MA, Nov. 16-18, 1992  
[SPIE-1829] p 190 A93-29101  
Flight Telerobotic Servicer legacy  
p 190 A93-29106  
Teleprogramming a cooperative space robotic workcell for Space Station  
p 190 A93-29109  
Dimensions of complexity in learning from interactive instruction --- for robotic systems deployed in space  
p 191 A93-29111  
An overview of the dynamic predictive architecture for robotic assistants  
p 191 A93-29112

Person-like intelligent systems architectures for robotic shared control and automated operations  
p 191 A93-29113  
Telerobotic system performance measurement - Motivation and methods  
p 191 A93-29114  
Recent developments at the Goddard Engineering Test Bed --- for force reflecting teleoperation system  
p 192 A93-29115  
The Servicing Aid Tool --- teleoperated manipulation system for space shuttle orbiters  
p 192 A93-29116  
Safety issues of manipulator systems under computer control  
p 192 A93-29121  
A distributed telerobotics system for space operations  
p 192 A93-29132  
Testbed for remote telepresence research  
p 193 A93-29135  
An experiment in vision based autonomous grasping within a reduced gravity environment  
p 193 A93-29137  
Robot free-flyers in space extravehicular activity  
p 193 A93-29141  
Flight Telerobotic Servicer legacy  
[AIAA PAPER 93-1157] p 231 A93-31032  
Centralized, decentralized, and independent control of a flexible manipulator on a flexible base  
p 231 A93-31517  
EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory  
p 231 A93-31522  
On the control of a class of flexible manipulators using feedback linearization approach  
p 231 A93-31533  
Telerobot control mode performance assessment  
[AAS PAPER 92-053] p 392 A93-50593  
Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot  
[AIAA PAPER 93-3863] p 392 A93-51449  
Optimal manipulator trajectories for space robots  
[AAS PAPER 91-669] p 410 A93-55838  
Research of a free-flying telerobot. IV - Development of dual-arm manipulation system  
p 411 A93-56254  
Research of a free-flying telerobot. V - Handling a target with multi-arms  
p 411 A93-56255  
Telemanipulation experiment using predictive display  
p 411 A93-56256  
Skill compensation and dynamic coupling of macro/smart effector system  
p 411 A93-56260  
**SPACE TRANSPORTATION SYSTEM**  
Machine vision in space  
p 395 A93-52641  
**SPACE TRANSPORTATION SYSTEM FLIGHTS**  
Utilization of the graded universal testing system to increase the efficiency for assessing aerobic and anaerobic capacity  
p 246 N93-26077  
**SPACEBORNE EXPERIMENTS**  
Hematological changes in space microgravity environments  
p 46 A93-15528  
Changes in total body water during spaceflight  
p 86 A93-17548  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite  
p 77 A93-18419  
Study design for microgravity human physiology experiments  
p 118 A93-25208  
Dynamics of the controlled environment conditions in 'SVET' greenhouse in flight  
p 152 A93-27460  
Influence of space-flight factors on growth of spirulina  
p 199 A93-30441  
The Biological Flight Research Facility  
p 239 A93-34581  
Responses of *Bacillus subtilis* spores to space environment - Results from experiments in space  
p 268 A93-36556  
Pilot investigation - Nominal crew induced forces in zero-g  
[SAE PAPER 921155] p 293 A93-41338  
Defining contamination control requirements for non-human research on Space Station Freedom  
[SAE PAPER 921386] p 308 A93-41544  
Design and evaluation of a payload to support plant growth onboard COMET 1  
[SAE PAPER 921389] p 308 A93-41547  
A matrix-based porous tube water and nutrient delivery system  
[SAE PAPER 921390] p 309 A93-41548  
STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission  
[NASA-TM-108034] p 80 N93-15823  
Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780  
Investigation of wheat coleoptile response to phototropic stimulations  
[NASA-CR-192157] p 114 N93-18608  
Space life sciences overview  
p 158 N93-21074  
The development of an automated cell culture system for use in space life science research  
p 158 N93-21085

Life sciences utilization of Space Station Freedom  
p 205 N93-22622  
Physiological experiments within the project AustroMir  
p 219 N93-24354  
Eye-head-arm coordination and spinal reflexes in weightlessness  
p 236 N93-24362  
Development and implementation of the MotoMir experiment on the Mir Space Station  
p 220 N93-24363  
Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation  
p 226 N93-24366  
Influence of microgravity on immune system and genetic information  
p 220 N93-24370  
The USO-concept applied to a biological model experiment  
p 210 N93-24379  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 N93-24382  
CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station  
p 210 N93-24401  
Japanese treefrog experiment onboard the Space Station Mir  
p 210 N93-24402  
Gravity and root morphogenesis  
p 210 N93-24403  
Development of *Arabidopsis thaliana* grown under microgravity conditions  
p 211 N93-24404  
MAC to VAX connectivity: Heart rate spectral analysis system  
p 254 N93-25594  
United States Army space experiment 601  
[AD-A261460] p 260 N93-26353  
Lunar surface experiment system  
p 316 N93-28034  
**SPACECRAFT CABIN ATMOSPHERES**  
The development of an atmosphere composition monitor for the Environmental Control and Life Support System  
[SAE PAPER 921149] p 292 A93-41333  
Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom  
[SAE PAPER 921216] p 296 A93-41392  
Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations  
[SAE PAPER 921231] p 297 A93-41405  
Operation of a breadboard liquid-sorbent/membrane-contact system for removing carbon dioxide and water vapor from air  
[SAE PAPER 921321] p 304 A93-41483  
Space Shuttle crew compartment debris-contamination  
[SAE PAPER 921345] p 305 A93-41504  
Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements  
[SAE PAPER 921347] p 305 A93-41506  
Shuttle Orbiter Environmental Control and Life Support System - Flight experience  
[SAE PAPER 921348] p 305 A93-41507  
Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey  
[SAE PAPER 921350] p 306 A93-41509  
NASA Specialized Center for Research and Training (NSCORT) in space environmental health  
[SAE PAPER 921358] p 307 A93-41517  
The General Purpose Work Station, a spacious microgravity workbench  
[SAE PAPER 921394] p 309 A93-41552  
Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals  
[SAE PAPER 921410] p 310 A93-41564  
The role of Environmental Health System air quality monitors in Space Station Contingency Operations  
[SAE PAPER 921414] p 310 A93-41565  
Atmospheric control systems  
p 365 N93-31456  
**SPACECRAFT CABINS**  
Experimental research of the temperature and humidity control system for manned spacecraft cabin  
p 10 A93-13529  
Controlled ecological life-support system - Use of plants for human life-support in space  
p 190 A93-28715  
Microflora of cabins of manned space objects and the problem of biological damage to the structural materials used in them  
p 262 A93-35237  
Human factors evaluation of the HL-20 full-scale model  
p 409 A93-53746  
**SPACECRAFT CONSTRUCTION MATERIALS**  
Microflora of cabins of manned space objects and the problem of biological damage to the structural materials used in them  
p 262 A93-35237  
**SPACECRAFT CONTAMINATION**  
Instrumentation for microbial monitoring of decontamination or biocide system effectiveness  
[SAE PAPER 921233] p 297 A93-41407

- The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality  
[SAE PAPER 921266] p 300 A93-41436
- Space Shuttle crew compartment debris-contamination  
[SAE PAPER 921345] p 305 A93-41504
- NASA Specialized Center for Research and Training (NSCORT) in space environmental health  
[SAE PAPER 921358] p 307 A93-41517
- Contaminant distribution and accumulation in water recycle systems  
[SAE PAPER 921360] p 307 A93-41519
- Space Station Condensing Heat Exchanger biofilm formation and control evaluation  
[SAE PAPER 921383] p 308 A93-41541
- First entry operations for spacecraft  
[SAE PAPER 921384] p 308 A93-41542
- Defining contamination control requirements for non-human research on Space Station Freedom  
[SAE PAPER 921386] p 308 A93-41544
- Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals  
[SAE PAPER 921410] p 310 A93-41564
- The role of Environmental Health System air quality monitors in Space Station Contingency Operations  
[SAE PAPER 921414] p 310 A93-41565
- SPACECRAFT CONTROL**  
Manipulator system for module redocking on the Mir  
Orbital Complex p 263 A93-35534
- Manned Space-Laboratories Control Centre (MSCC) training  
p 339 A93-43330
- A space manipulator with inertially fixed base?  
[AIAA PAPER 93-3866] p 393 A93-51452
- Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle  
[NASA-CR-192021] p 138 A93-17970
- SPACECRAFT DESIGN**  
An approach to the functional optimization of the CELSS Test Facility  
[SAE PAPER 921199] p 295 A93-41375
- System integration and verification approach for the environmental control system of the Columbus Attached Pressurized Module  
[SAE PAPER 921261] p 299 A93-41431
- Human habitat design for the Space Exploration Initiative  
p 344 A93-41978
- EVA operational guidelines and considerations for use during the Space Station Freedom design review process  
p 345 A93-42119
- Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle  
[NASA-CR-192021] p 138 A93-17970
- SHARC: Space Habitat, Assembly and Repair Center  
[NASA-CR-192031] p 140 A93-18153
- Advanced life support study. Modification 10: ECLSS logistical support analysis for Space Station Freedom  
[NASA-CR-192481] p 266 A93-25888
- Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover  
p 316 A93-28032
- SPACECRAFT DOCKING**  
Manipulator system for module redocking on the Mir  
Orbital Complex p 263 A93-35534
- SPACECRAFT ENVIRONMENTS**  
Dynamics of the controlled environment conditions in 'SVET' greenhouse in flight  
p 152 A93-27460
- Living and working in space - Evolution of nursing in a new environment  
p 166 A93-28710
- Health in space - And on Earth  
p 156 A93-28738
- Skin care in the space environment  
p 170 A93-28756
- Space Station Freedom Environmental Health Care Program  
[SAE PAPER 921138] p 292 A93-41325
- Zero gravity phase separator technologies - Past, present and future  
[SAE PAPER 921160] p 293 A93-41342
- Conceptual design of ECLSS microgravity test beds  
[SAE PAPER 921164] p 294 A93-41346
- Sabatier carbon dioxide reduction system for Space Station Freedom  
[SAE PAPER 921189] p 294 A93-41368
- System integration and verification approach for the environmental control system of the Columbus Attached Pressurized Module  
[SAE PAPER 921261] p 299 A93-41431
- The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality  
[SAE PAPER 921266] p 300 A93-41436
- The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test  
[SAE PAPER 921269] p 300 A93-41439
- Environmental control of the Mini Pressurized Logistic Module  
[SAE PAPER 921281] p 302 A93-41449
- SPACECRAFT EQUIPMENT**  
Zero-gravity underwater simulations for the Columbus programme - Outcome of the first campaigns  
p 62 A93-17075
- Selecting Space Station Freedom hardware  
p 188 A93-27184
- Lunar surface experiment system  
p 316 A93-28034
- SPACECRAFT INSTRUMENTS**  
Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle  
[NASA-CR-192021] p 138 A93-17970
- Lunar surface experiment system  
p 316 A93-28034
- SPACECRAFT MAINTENANCE**  
HERA - A reliable and safe space robot  
p 263 A93-35571
- EVA operational guidelines and considerations for use during the Space Station Freedom design review process  
p 345 A93-42119
- Integrated tools for teleoperated satellite repair  
p 409 A93-54845
- A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever  
[NASA-CR-193301] p 365 A93-31844
- SPACECRAFT MODULES**  
Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture  
[SAE PAPER 921193] p 295 A93-41371
- The effects of a reduced pressure scenario on the Columbus APM environmental control system  
[SAE PAPER 921247] p 298 A93-41418
- Environmental control of the Mini Pressurized Logistic Module  
[SAE PAPER 921281] p 302 A93-41449
- Human habitat design for the Space Exploration Initiative  
p 344 A93-41978
- Evolving technologies for Space Station Freedom computer-based workstations  
p 313 A93-27794
- SPACECRAFT MOTION**  
An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle  
p 170 A93-28758
- SPACECRAFT POWER SUPPLIES**  
Evolution of Space Station EMU PLSS technology recommendations  
p 312 A93-27790
- SPACECRAFT RECOVERY**  
TALON and CRADLE: Systems for the rescue of tumbling spacecraft and astronauts  
p 196 A93-22268
- SPACECRAFT SHIELDING**  
Shielding strategies for human exploration missions  
[SAE PAPER 921376] p 308 A93-41534
- Depth-dose equivalent relationship for cosmic rays at various solar minima  
p 391 A93-49564
- SPACECRAFT TRAJECTORIES**  
Operator-assisted planning and execution of proximity operations subject to operational constraints  
p 194 A93-21436
- SPACECREWS**  
Glovebox design for Space Station Freedom Crew Health Care System  
[SAE PAPER 921139] p 292 A93-41326
- A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests  
[SAE PAPER 921154] p 293 A93-41337
- Potential health effects of fume particles on the crew of spacecrafts  
[SAE PAPER 921387] p 308 A93-41545
- Main medical results of extended flights on Space Station Mir in 1986-1990  
p 386 A93-52401
- A health care system for the Space Station  
[NASA-TM-108093] p 65 A93-13571
- The environmental control and life-support system for a lunar base: What drives its design  
p 66 A93-13991
- Applications of living systems theory to life in space  
p 105 A93-16865
- Life support and self-sufficiency in space communities  
p 105 A93-16866
- Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress  
[AD-A258552] p 148 A93-19955
- Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition  
[NASA-TP-3297] p 149 A93-20319
- Biomedical Monitoring and Countermeasures Facility  
p 205 A93-22624
- An on-orbit viewpoint of life sciences research  
p 206 A93-22629
- Crew health  
p 217 A93-22630
- Selection of astronauts for European space missions  
p 225 A93-24345
- The European astronauts training programme  
p 226 A93-24346
- Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 A93-24382
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-022] p 253 A93-25407
- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN)  
p 258 A93-25595
- Utilization of the graded universal testing system to increase the efficiency for assessing aerobic and anaerobic capacity  
p 246 A93-26077
- Automation and robotics human performance  
[NASA-CR-193049] p 267 A93-26153
- SPACELAB**  
Crew performance in Spacelab  
p 176 A93-27169
- Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters  
[NASA-TM-108375] p 6 A93-12174
- STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission  
[NASA-TM-108034] p 80 A93-15823
- SPACELAB PAYLOADS**  
Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission)  
p 200 A93-32071
- The General Purpose Work Station, a spacious microgravity workbench  
[SAE PAPER 921394] p 309 A93-41552
- Development of Arabidopsis thaliana grown under microgravity conditions  
p 211 A93-24404
- SPACING**  
Perceptual dimensions of visual scenes relevant for simulating low-altitude flight  
[AD-A254645] p 57 A93-12662
- Gloved operator performance study  
[AD-A256894] p 104 A93-16048
- SPATIAL DISTRIBUTION**  
Development of a tactile perceived attitude transducer  
[AD-A253724] p 25 A93-11081
- Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity  
[AD-A255989] p 58 A93-14416
- Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision  
[AD-A256059] p 58 A93-14580
- Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display  
[AD-A264401] p 353 A93-30167
- SPATIAL FILTERING**  
Adaptive filters for monitoring localized brain activity from surface potential time series  
[DE93-003795] p 217 A93-22774
- SPATIAL RESOLUTION**  
Spatio-temporal masking: Hyperacuity and local adaptation  
[AD-A257934] p 121 A93-18006
- SPECIES DIFFUSION**  
Revision of the Wind River faunas, early Eocene of central Wyoming. X - Bunophorus (Mammalia, Artiodactyla)  
p 203 A93-33026
- SPECIFICATIONS**  
Microbiological methods for the water recovery systems test, revision 1.1  
[NASA-CR-184390] p 64 A93-12966
- Specification of adaptive aiding systems  
[AD-A263071] p 314 A93-27927
- SPECIMENS**  
Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program  
[DOT/FAA/AM-92/15] p 218 A93-24088
- SPECTRAL SENSITIVITY**  
Toward the ideal military aviation sunglass  
[AD-A258200] p 140 A93-18200
- SPECTROPHOTOMETRY**  
Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis  
[AD-A255582] p 95 A93-16041
- SPECTROSCOPIC ANALYSIS**  
Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels  
[DE93-007815] p 246 A93-26587
- SPECTRUM ANALYSIS**  
Spectral analysis of visual symbols  
p 30 A93-13718
- Spectral analysis of the electroencephalographic response to motion sickness  
p 116 A93-24041
- MAC to VAX connectivity: Heartrate spectral analysis system  
p 254 A93-25594
- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin  
[AD-A262979] p 284 A93-28293
- SPEECH**  
Headphone localization of speech  
p 394 A93-52507



## SPEECH RECOGNITION

### SPEECH RECOGNITION

- Controllability of the voice command system - A preliminary study p 27 A93-11287  
Headphone localization of speech stimuli p 176 A93-27143  
Evaluation of speech technology for enhancing performance of man-machine systems p 350 A93-44846  
The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft p 146 A93-19772  
G-load effects and efficient acoustic parameters for robust speaker recognition p 146 A93-19775  
The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 A93-26082  
Evolving technologies for Space Station Freedom computer-based workstations p 313 A93-27794

### SPEED CONTROL

- Rotational speed control p 365 A93-31457

### SPERMATOGENESIS

- Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenous layer of rat testes p 240 A93-35229  
Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935

### SPERMATOZOA

- Sperm motility under conditions of weightlessness p 156 A93-28730

### SPINAL CORD

- Comment on 'Optimum vehicle acceleration profile for minimum human injury' by C. P. Hatsell p 392 A93-49607  
Improved head support stand adjustable by compound turnbuckle [AD-D015384] p 55 A93-15249  
Secondary injury factors and preventative treatment [PB93-176014] p 283 A93-27409

### SPINE

- Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study p 216 A93-32786  
The effect of variable seat back angles on human response to +Gz impact accelerations [AD-A250673] p 31 A93-11559  
Sudden loading and fatigue effects on the human spine [PB93-167526] p 286 A93-29199

### SPLEEN

- Effects of antiorthostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693

### SPLINES

- Optimal design of composite hip implants using NASA technology p 174 A93-22188

### SPORES

- Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391  
Photobiological investigations on spores of streptomyces griseus [ESA-TT-1269] p 277 A93-29274

### SPRINGS (WATER)

- Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377  
Life in hot springs and hydrothermal vents p 243 A93-36559

### STAIRWAYS

- Platform stair lift [NASA-CASE-MFS-28772-1] p 353 A93-29845

### STANDARDIZATION

- Head-up display standardization and the utility of analog vertical velocity information during instrument flight p 189 A93-27451  
Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 A93-12966  
Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 A93-23081

### STAPHYLOCOCCUS

- Aquatic biofilms and their responses to disinfection and invading species [SAE PAPER 921211] p 296 A93-41387

### STATIC LOADS

- An improved simulation based biomechanical model to estimate static muscle loadings p 160 A93-27172

### STATISTICAL ANALYSIS

- Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training p 98 A93-18773  
Individual differences and subgroups within populations - The shopping bag approach p 136 A93-24050  
Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049

- Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 A93-11297

- Evaluation and estimation of handling qualities via statistical modeling of pilot response data [AD-A255324] p 69 A93-14548

- Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness [AD-A255485] p 54 A93-14789  
Age 60 Project: Consolidated database experiments [HS-TR-8025-3C(R2)] p 314 A93-27851

- Determinants of performance rating accuracy: A field study [AD-A264726] p 342 A93-30575  
Application and validation of workload assessment techniques [AD-A264575] p 366 A93-32012

### STATISTICAL CORRELATION

- Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287

### STATISTICAL DETECTION THEORY

- Theory of signal detection and its application to visual target acquisition: A review of the literature [AD-A262920] p 288 A93-28307

### STELLAR ATMOSPHERES

- Laboratory simulation of organic grain mantles p 268 A93-36554

### STEREOCHEMISTRY

- Terrestrial and extraterrestrial sources of molecular homochirality p 110 A93-17986

### STEREOSCOPIC VISION

- 3-D surface description from binocular stereo p 61 A93-14727  
Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays p 102 A93-19987  
Spatial judgments with monoscopic and stereoscopic presentation of perspective displays p 102 A93-19988  
Prospective assessment of stereoscopic visual status and USAF pilot training attrition p 116 A93-24039  
Exocentric judgements in real environments and stereoscopic displays p 189 A93-27190  
Factors that affect depth perception in stereoscopic displays p 230 A93-30455  
Human stereopsis p 223 A93-30456  
Human behavior in virtual environments p 233 A93-33447

- Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895

- Flight mechanics of high-performance aircraft [ISBN 0-521-34123-X] p 365 A93-47019  
Depth-viewing-volume increase by collimation of stereo 3-D displays p 407 A93-52915  
In-simulator assessment of trade-offs arising from mixture of color cuing and monocular, binocular, and stereopsis cuing information p 407 A93-52916  
Stereoscopic displays and applications III; Proceedings of the Meeting, San Jose, CA, Feb. 12, 13, 1992 [SPIE-1669] p 408 A93-53119  
High-resolution inserts in wide-angle head-mounted stereoscopic displays p 408 A93-53121  
Higher order mechanisms of color vision [AD-A256369] p 60 A93-15329  
Intermediate levels of visual processing [AD-A264117] p 335 A93-30192

- STEREOSCOPY  
Intermediate levels of visual processing [AD-A264117] p 335 A93-30192

### STEREOTELEVISION

- User evaluation of a stereoscopic display for space training applications p 408 A93-53123

### STERILIZATION

- Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process [SAE PAPER 921234] p 297 A93-41408

### STIFFNESS

- Hybrid 2 and hybrid 3 dummy neck properties for computer modeling [AD-A255544] p 66 A93-13874

### STIMULANTS

- Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173

### STIMULATION

- Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia p 79 A93-20038  
Mechanical forces and their second messengers in stimulating cell growth in vitro p 204 A93-33043  
Mapping of electrical muscle stimulation using MRI p 279 A93-40549

- How well does the clinostat mimic the effect of microgravity on plant cells and organs? p 376 A93-49213

- Constraints on learning in dynamic synapses [PREPRINT-890] p 100 A93-17026

- Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 A93-24763

- Mechanical stimulation of skeletal muscle increases prostaglandin F2(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism [NASA-CR-193041] p 282 A93-27102

### STIMULI

- Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244

- Animal models in motion sickness research p 399 A93-55936  
Investigating motion sickness using the conditioned taste aversion paradigm p 400 A93-55937

- The accelerative stimulus for motion sickness p 410 A93-55938

- Adaptation to the simulated stimulus rearrangement of weightlessness p 403 A93-55942  
Adaptation to nauseogenic motion stimuli and its application in the treatment of airsickness p 404 A93-55947

### STOCHASTIC PROCESSES

- 3-D surface description from binocular stereo p 61 A93-14727

- Constraints on learning in dynamic synapses [PREPRINT-890] p 100 A93-17026

### STOMACH

- A modified method for investigating gastric secretion in aviation medical examination p 359 A93-45692

### STRATEGY

- Overconfidence, preview, and probability in strategic planning p 179 A93-27195

### STREPTOMYCETES

- Photobiological investigations on spores of streptomyces griseus [ESA-TT-1269] p 277 A93-29274

### STRESS (BIOLOGY)

- Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration II p 9 A93-11286  
Intracellular proteins produced by mammalian cells in response to environmental stress p 328 A93-44929

### STRESS (PHYSIOLOGY)

- Altered baseline blood volume and the norepinephrine response to stress in humans p 43 A93-14123  
Beta-endorphin and arginine vasopressin following stressful sensory stimuli in man p 47 A93-16158  
Human stress - Measurement and consequences p 49 A93-17440

- Molecular mechanisms of stress --- of astronauts during various phases of their lunar and Martian travels p 49 A93-17443

- Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729

- Self-organizing character of alpha wave in EEG due to acute hypoxic hypoxia in normal subjects p 213 A93-30436

- The state of the endocrine system of rats of different age under conditions of immobilization stress and biomas administration p 242 A93-35671  
Human factors problems for aircrew-aircraft interfaces - Where should we focus our efforts? p 264 A93-37300

- Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391

- Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

- Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116

- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets [AD-A252427] p 13 A93-10709

- Space flight and immune system p 14 A93-11284  
Thermal stress in US Air Force operations [AD-A255785] p 51 A93-14027

- Physiological stress from chemical defense clothing and equipment [AD-A255786] p 51 A93-14028

- The relationship between environmental conditions and UH-60 cockpit temperature [AD-A255918] p 69 A93-14090

- Decision making in a dynamic task environment: The effect of time pressure [AD-A256557] p 58 A93-14602

- Training, muscle fatigue and stress fractures  
[AD-A255277] p 54 N93-15006
- The effect of pain on task performance: A review of the literature  
[AD-A254336] p 59 N93-15216
- Development and enhancement of a model of performance and decision making under stress in a real life setting  
[AD-A255699] p 99 N93-16111
- Development and enhancement of a mode of performance and decision making under stress in a real life setting  
[AD-A257796] p 123 N93-18363
- Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress  
[AD-A258552] p 148 N93-19955
- Evaluation of two microclimate cooling air vests on a heated mannequin  
[AD-A259410] p 194 N93-21269
- Stress resistance as a diagnostic category in air traffic controller selection  
[DLR-FB-92-13] p 219 N93-24092
- Cardiovascular stress test with non-invasive techniques  
p 221 N93-24399
- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits  
[AD-A262862] p 350 N93-29471
- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011
- STRESS (PSYCHOLOGY)**
- Human stress - Measurement and consequences  
p 49 A93-17440
- Psychophysiological stress research - Methodology and results of an investigation involving air traffic controllers [ISBN-3-258-04585-2] p 97 A93-17971
- Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots  
p 118 A93-25203
- An individual differences approach to fitness-for-duty assessment  
p 178 A93-27178
- Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones  
p 251 A93-35495
- Changes in the brain blood flow and respiration during psychoemotional stress  
p 252 A93-36723
- Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel  
p 257 A93-36744
- Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress  
p 253 A93-36745
- DoD space radiation concerns  
[AD-A253135] p 13 N93-10613
- Space flight and immune system  
p 14 N93-11284
- Stress resistance as a diagnostic category in air traffic controller selection  
[DLR-FB-92-13] p 219 N93-24092
- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011
- STRESS ANALYSIS**
- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets  
[AD-A252427] p 13 N93-10709
- STRESS MEASUREMENT**
- Time stress measurement devices for enhancement of onboard bit performance  
p 144 N93-19762
- STRESS-STRAIN RELATIONSHIPS**
- Effect of cytoskeletal reagents on stretch activated ion channels  
[AD-A261089] p 245 N93-25764
- STRUCTURAL DESIGN**
- Industrial design influence on today's flight decks  
p 61 A93-14378
- Air Traffic Control facility lighting  
p 188 A93-27167
- Development of a large space robot - A multi-segment approach. I  
[AIAA PAPER 93-1463] p 261 A93-34012
- Development of a large space robot - A multi-segment approach. II  
[AIAA PAPER 93-1464] p 262 A93-34013
- Inflatable habitation for the lunar base  
p 106 N93-17442
- Design of a radiator shade for testing in a simulated lunar environment  
[NASA-CR-192080] p 108 N93-17710
- STRUCTURAL DESIGN CRITERIA**
- A trade study method for determining the design parameter of CELSS subsystems  
[SAE PAPER 921198] p 295 A93-41374
- Power assist EVA glove development  
[SAE PAPER 921255] p 299 A93-41425
- Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment  
[NASA-TM-104767] p 234 N93-23129
- STRUCTURAL ENGINEERING**
- GENESIS 2: Advanced lunar outpost  
p 352 N93-29760
- STRUCTURAL FAILURE**
- The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989  
p 118 A93-25201
- Can injury scoring techniques provide additional information for crash investigators?  
p 125 N93-19663
- STRUCTURAL RELIABILITY**
- Probabilistic simulation of the human factor in structural reliability  
p 365 N93-31573
- STRUCTURAL VIBRATION**
- Development of a large space robot - A multi-segment approach. II  
[AIAA PAPER 93-1464] p 262 A93-34013
- Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle  
[NASA-CR-192021] p 138 N93-17970
- Transmission of vibration through the human body to the head: A summary of experimental data  
[ISVR-TR-218] p 361 N93-32237
- STUDENTS**
- Questioning mechanisms during complex learning  
[AD-A247382] p 26 N93-11415
- Suited for spacewalking: A teacher's guide with activities  
[NASA-EP-279] p 65 N93-13692
- Contribution of personality to the prediction of success in initial air traffic control specialist training  
[DOT/FAA/AM-93/4] p 259 N93-26138
- SUBCONTRACTS**
- Human factors research in aircrew performance and training: 1986-1991  
[AD-A254455] p 63 N93-12609
- SUBMARINES**
- A low pressure electrolyzer for the next generation submarine  
[SAE PAPER 921125] p 291 A93-41316
- Submarine Advanced Integrated Life Support system (SAILS) program  
[AD-A253564] p 32 N93-11812
- Membrane technology: A search for membranes for submarine atmosphere control  
[AD-A260581] p 266 N93-25904
- SUBMERGING**
- Decrement in manual arm performance during whole body cooling  
p 88 A93-18038
- Effect of task complexity on mental performance during immersion hypothermia  
p 211 A93-30279
- Vestibulo-oculomotor responses under conditions of immersion hypokinesia  
p 251 A93-35256
- Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men  
[NASA-TM-103949] p 6 N93-12014
- SUBSTITUTES**
- Carboxyalkylated hemoglobin as a potential blood substitute  
[AD-A252329] p 22 N93-11561
- SUBSTRATES**
- Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates  
[AD-A262762] p 285 N93-28939
- SUCTION**
- Effect of cytoskeletal reagents on stretch activated ion channels  
[AD-A261089] p 245 N93-25764
- SUITS**
- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits  
[AD-A262862] p 350 N93-29471
- SULFATES**
- Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments  
p 80 A93-20672
- Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy  
p 155 A93-28725
- Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate  
[NASA-CR-193278] p 330 N93-30665
- SULFIDES**
- Magnetic domain state and coercivity predictions for biogenic greigite (Fe<sub>3</sub>S<sub>4</sub>) - A comparison of theory with magnetosome observations  
p 38 A93-16481
- Mineral theories of the origin of life and an iron sulfide example  
p 74 A93-18009
- Biological conversion of synthesis gas culture development  
[DE92-001279] p 6 N93-12482
- SULFONIC ACID**
- Carboxyalkylated hemoglobin as a potential blood substitute  
[AD-A252329] p 22 N93-11561
- SULFUR**
- Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate  
[NASA-CR-193278] p 330 N93-30665
- SUN**
- Habitable zones around main sequence stars  
p 197 A93-28376
- SUNGLASSES**
- Toward the ideal military aviation sunglass  
[AD-A258200] p 140 N93-18200
- SUPERSONIC AIRCRAFT**
- Physiological indices of mental workload  
[AD-A261692] p 260 N93-26391
- SUPPORT SYSTEMS**
- Military aircrew head support system  
p 231 A93-31944
- Introduction to training decisions modeling technologies: The training decisions system  
[AD-A249862] p 27 N93-12252
- Operator Performance Support System (OPSS)  
p 196 N93-22195
- Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502
- SUPPORTS**
- Improved head support stand adjustable by compoundturnbuckle  
[AD-D015384] p 55 N93-15249
- SURFACE CRACKS**
- Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces --- space biological evolution  
p 411 A93-53286
- SURFACE NAVIGATION**
- Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights  
[AD-A264626] p 341 N93-30426
- SURGERY**
- Animal surgery in microgravity  
p 112 A93-24047
- Challenges of space medical operations and life sciences management  
p 155 A93-28716
- Management of trauma and emergency surgery in space  
p 167 A93-28734
- Photo-Refractive Keratectomy (PRK) - Threat or millennium for military pilots?  
p 401 A93-55169
- Postoperative hyperbaric oxygen treatment of peripheral nerve damage  
[AD-A255842] p 52 N93-14084
- SURVEYS**
- Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption  
[AD-A250648] p 23 N93-11893
- Aircrew acceptance of automation in the cockpit  
p 144 N93-19761
- Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program  
[DOT/FAA/AM-92/15] p 218 N93-24088
- Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988  
[AD-A260869] p 265 N93-25628
- Anthropometric survey of the astronaut applicants and astronauts from 1985 to 1991  
[NASA-RP-1304] p 321 N93-29324
- The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas  
p 369 N93-32257
- SURVIVAL**
- K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions  
p 90 A93-18406
- K.E. Tsiolkovsky on the problem of human survival in extreme environments (On the earth and in space)  
p 77 A93-18407
- The effects of prolonged weightlessness and reduced gravity environments on human survival  
p 214 A93-30773
- Altering the position of the first horizontal cleavage furrow of the amphibian (Xenopus) egg reduces embryonic survival  
p 272 A93-39717
- Biosphere 2 - Overview of system performance during the first nine months  
[SAE PAPER 921129] p 291 A93-41317
- Mechanisms of immune failure in burn injury  
p 15 N93-11285
- Applications of living systems theory to life in space  
p 105 N93-18665

- Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario  
[AD-A258744] p 128 N93-20384
- Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems  
[NASA-CR-192571] p 359 N93-32365
- SUSPENDING (HANGING)**
- Protection of *Acanthopanax senticosus* against suspension-induced bone loss in rats p 2 A93-13528
- Effects of antinotion sickness drug mixture B on ultrastructures of cerebral and cerebellar cortexes in suspended rabbits p 10 A93-13704
- Effects of vitamin 'D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats p 77 A93-19994
- Ultrastructural and biochemical studies on muscle atrophy induced by suspension and suspension with denervation in lower limbs of rats p 200 A93-31530
- Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat p 327 A93-44844
- A simple hindlimb suspension apparatus p 398 A93-55168
- SWIMMING**
- Swimming behavior of the unicellular flagellate, *Euglena gracilis*, in simulated and real microgravity p 151 A93-26549
- Multiple evolutionary origins of magnetotaxis in bacteria p 153 A93-27799
- SWINE**
- Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin  
[AD-A258185] p 120 N93-17900
- SYMBOLS**
- Symbolology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857
- The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 N93-31233
- SYMMETRY**
- Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176
- SYMPATHETIC NERVOUS SYSTEM**
- Investigation of hemodynamics and sympatheticoadrenal system activity in air traffic controllers during their work p 247 A93-35209
- Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity p 240 A93-35224
- Tissue-specific noradrenergic activity during acute heat stress in rats p 323 A93-42193
- Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328
- Melatonin, the pineal gland, and circadian rhythms  
[AD-A264099] p 337 N93-31061
- SYNAPSES**
- Persistent blockade of potassium-evoked serotonin release from rat frontocortical terminals after fluoxetine administration p 202 A93-32125
- Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A256340] p 55 N93-15198
- Non-invasive evaluation of the cardiac autonomic nervous system by PET  
[DE92-041077] p 96 N93-16441
- Constraints on learning in dynamic synapses  
[PREPRINT-890] p 100 N93-17026
- Electrically modifiable nonvolatile SONOS synapses for electronic neural networks  
[AD-A258318] p 122 N93-18252
- Theory of synaptic plasticity in visual cortex  
[AD-A260322] p 219 N93-24238
- Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A264829] p 336 N93-30613
- SYNCHRONISM**
- Acoustical and vibratory stimuli interdependencies and their applications in simulation and cue synchronization  
[AIAA PAPER 93-3562] p 406 A93-52662
- Neurochemical control of circadian rhythms  
[AD-A255054] p 50 N93-13116
- SYNCOPE**
- Cases from the aerospace medicine residents' teaching file: Case No.52 - A flyer with syncope (clinical conference) p 168 A93-28740
- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC)  
[AD-A264492] p 335 N93-30400
- SYNTHESIS (CHEMISTRY)**
- Development of the nitrogen fixation system for CELSS  
[SAE PAPER 921238] p 297 A93-41411
- Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792
- Nucleotide analogs based on pentaerythritol - An hypothesis p 325 A93-43794
- Biological conversion of synthesis gas culture development  
[DE92-001279] p 6 N93-12482
- Hydrothermal organic synthesis experiments  
[NASA-CR-191257] p 41 N93-13457
- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin  
[AD-A262979] p 284 N93-28293
- SYNTHETIC FIBERS**
- Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161
- Finite element analysis of a composite artificial ankle p 174 N93-22189
- SYNTHETIC FUELS**
- Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals  
[DE93-006235] p 276 N93-28890
- SYSTEM EFFECTIVENESS**
- Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503
- Health maintenance facility system effectiveness testing  
[NASA-TM-104737] p 372 N93-32328
- SYSTEM FAILURES**
- The effects of history and predictive information on the ability of the transport aircraft pilot to predict an alert p 365 A93-46810
- High level organizing principles for display of systems fault information for commercial flight crews p 388 A93-52187
- SYSTEM IDENTIFICATION**
- Application of system identification to research on cardiovascular regulatory function p 3 A93-13544
- SYSTEMS ANALYSIS**
- A systems analysis to identify human factors issues and requirements for data link p 186 A93-27153
- Overview of NASA's 1991 Life Support Systems Analysis Workshop  
[SAE PAPER 921118] p 290 A93-41310
- TRIALSS - Tool for Rapid and Intelligent Advanced Life Support System Selection and Sizing  
[SAE PAPER 921123] p 291 A93-41315
- 'Liveware' survey of human systems integration (HSI) tools p 349 A93-42847
- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions  
[AD-A252820] p 26 N93-11779
- Applications of living systems theory to life in space p 105 N93-16865
- 1991 NASA Life Support Systems Analysis workshop  
[NASA-CR-4466] p 310 N93-27100
- 1992 NASA Life Support Systems Analysis workshop  
[NASA-CR-4467] p 310 N93-27101
- Lunar base thermal management/power system analysis and design p 315 N93-27985
- SYSTEMS ENGINEERING**
- Study of overall analysis method of the man-machine-environment systems p 61 A93-14413
- In search of the human touch --- in design of robotic hands p 102 A93-19256
- Individual differences in computerized test performance for systems integration in cockpit management p 177 A93-27176
- Functions simulation model of integrated regenerable life support system  
[SAE PAPER 921201] p 295 A93-41377
- Simplified analysis of water distribution for Space Station Freedom  
[SAE PAPER 921230] p 296 A93-41404
- Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations p 297 A93-41405
- Design and preliminary testing of a membrane based water recycling system for European manned space missions  
[SAE PAPER 921396] p 309 A93-41553
- Hermes ECLSS - Main requirements and technical solutions  
[SAE PAPER 921400] p 309 A93-41555
- Human performance data visualization for system design teams p 348 A93-42840
- Task allocation and automation in design and operation of man-machine systems p 348 A93-42842
- Design of the man-machine interface for an automatic target cuer system p 348 A93-42843

- Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302
- Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254
- A voyage to Mars: A challenge to collaboration between man and machines p 70 N93-14614
- A monitoring and control system for complex man-machine systems: Preliminary design p 70 N93-14951
- Advanced Aircraft Interfaces: The Machine Side of the Man-Machine Interface  
[AGARD-CP-521] p 144 N93-19757
- The integration of advanced cockpit and systems design p 147 N93-19779
- Architecture of autonomous systems  
[NASA-CR-192974] p 266 N93-26047
- Specification of adaptive aiding systems  
[AD-A263071] p 314 N93-27927
- Operator and automation capability analysis: Picking the right team p 319 N93-28864
- System automation and pilot-vehicle-interface for unconstrained low-altitude night attack p 320 N93-28867
- Overview of cockpit technology research and development programs for improvement of the man/machine interface: Review of the AGARD AVP Symposium held in Madrid, May 1992 p 320 N93-28872
- SYSTEMS INTEGRATION**
- Individual differences in computerized test performance for systems integration in cockpit management p 177 A93-27176
- Helmet-mounted systems technology planning for the future p 227 A93-30052
- I-NIGHTS and beyond --- Interim-Night Integrated Goggle and Head Tracking System p 227 A93-30054
- Overview of NASA's 1991 Life Support Systems Analysis Workshop  
[SAE PAPER 921118] p 290 A93-41310
- 'Liveware' survey of human systems integration (HSI) tools p 349 A93-42847
- The integration of advanced cockpit and systems design p 147 N93-19779
- Space Station ECLSS integration analysis  
[NASA-CR-192470] p 195 N93-22002
- Environmental control and life support system evolution p 311 N93-27719
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies  
[AGARD-CP-520] p 317 N93-28850
- SYSTEMS SIMULATION**
- Functions simulation model of integrated regenerable life support system  
[SAE PAPER 921201] p 295 A93-41377
- SYSTOLIC PRESSURE**
- Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321
- T**
- TABLES (DATA)**
- Statistically based decompression tables 8: Linear-exponential kinetics  
[AD-A257613] p 120 N93-17926
- TACTILE SENSORS (ROBOTICS)**
- In search of the human touch --- in design of robotic hands p 102 A93-19256
- Using tactile information in telerobotics p 138 A93-25482
- Modeling of a full vision system using combined Visual/Haptic search for remote object identification  
[AD-A260977] p 266 N93-25867
- TAKEOFF**
- A study of decision making and performance in rejected takeoffs  
[SAE PAPER 921134] p 287 A93-41322
- A comparative evaluation of three take-off performance monitor display types  
[AIAA PAPER 93-3608] p 406 A93-52669
- TANKS (COMBAT VEHICLES)**
- A progressive resistance weight training program designed to improve the armor crewman's strength  
[AD-A255553] p 53 N93-14556
- TARGET ACQUISITION**
- Design of the man-machine interface for an automatic target cuer system p 348 A93-42843
- 3-D target designation using two control devices and an aiding technique --- in fighter cockpits p 408 A93-53120
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue  
[AD-A257704] p 107 N93-17697

- Toward the ideal military aviation sunglass  
[AD-A258200] p 140 N93-18200
- Stimulus presentation formats and measurement techniques for the quantification of target detection performance  
[AD-A258933] p 133 N93-19449
- Theory of signal detection and its application to visual target acquisition: A review of the literature  
[AD-A262920] p 288 N93-28307
- Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight  
[AD-A264661] p 341 N93-30542
- TARGET RECOGNITION**
- Involuntary attentional capture by abrupt onsets  
p 97 A93-17974
- Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice  
p 186 A93-27145
- Movement tracking performance as a function of required force level  
p 177 A93-27171
- Proposed evaluation framework for assessing operator performance with multisensor displays  
p 232 A93-33444
- Human factors problems for aircrew-aircraft interfaces - Where should we focus our efforts?  
p 264 A93-37300
- Design of the man-machine interface for an automatic target cue system  
p 348 A93-42843
- Psychophysiological study on the effects of co-existence of lines for detecting dot target  
p 405 A93-55330
- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment)  
[AD-A255525] p 70 N93-14554
- Multimodal interactions in sensory-motor processing  
[AD-A255780] p 59 N93-15067
- Stimulus presentation formats and measurement techniques for the quantification of target detection performance  
[AD-A258933] p 133 N93-19449
- Man-machine interface with simulated automatic target recognition systems  
p 147 N93-19781
- Adaptive autonomous target cue  
p 148 N93-19784
- Theory of signal detection and its application to visual target acquisition: A review of the literature  
[AD-A262920] p 288 N93-28307
- Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight  
[AD-A264661] p 341 N93-30542
- TARGET SIMULATORS**
- Man-machine interface with simulated automatic target recognition systems  
p 147 N93-19781
- TARGETS**
- Comparative assessment of psychomotor performance - Target prediction by humans and macaques (Macaca mulatta)  
p 204 A93-33035
- Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks  
p 287 A93-41166
- TASK COMPLEXITY**
- Designing the right visor  
p 181 A93-26885
- Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation --- Task Load Index  
p 175 A93-27139
- The effect of type of task, degree of integration, and modality on the performance of concurrent tasks  
p 175 A93-27140
- Experimental validation of the attention switching component of the COGNET framework  
p 186 A93-27141
- Electronic map interpretation in a dual-task context  
p 176 A93-27144
- Response to automated function failure cue - An operational measure of complacency  
p 176 A93-27147
- Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation  
p 186 A93-27148
- Reclined seating in advanced crewstations - Human performance considerations  
p 186 A93-27151
- Colour head-up displays - Help or hindrance?  
p 187 A93-27154
- Evaluating robot procedures and tasks for the flight telerobotic servicer  
p 187 A93-27156
- Task-analytic evaluations of Space Station Freedom workstations  
p 187 A93-27157
- Using GOMS models and hypertext to create representations of medical procedures for online display  
p 188 A93-27170
- Effects of fatigue and heat stress on vigilance of workers in protective clothing  
p 177 A93-27173
- Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy  
p 211 A93-30278
- Effect of task complexity on mental performance during immersion hypothermia  
p 211 A93-30279
- Cognitive competencies - Products of genes, experience, and technology --- for training of primates  
p 201 A93-32113
- Learning about primates' learning, language, and cognition  
p 201 A93-32124
- A force-reflecting teleoperated hand system for the study of tactile sensing in precision manipulation  
p 263 A93-35536
- A procedure for the frequency analysis of telerobotic tasks data  
p 392 A93-50513
- Human performance in complex task environments: A basis for the application of adaptive automation  
[AD-A255067] p 35 N93-12486
- Dual-task training strategies and aging  
[AD-A258261] p 131 N93-18027
- The central executive component of working memory  
[AD-A258724] p 135 N93-20326
- TASK PLANNING (ROBOTICS)**
- Knowledge-based task planning for the Special Purpose Dexterous Manipulator  
p 191 A93-29110
- Dimensions of complexity in learning from interactive instruction --- for robotic systems deployed in space  
p 191 A93-29111
- Telerobotic system performance measurement - Motivation and methods  
p 191 A93-29114
- Recent developments at the Goddard Engineering Test Bed --- for force reflecting teleoperation system  
p 192 A93-29115
- Human-like agents with posture planning ability  
p 192 A93-29118
- Optimizing dynamic transparency in teleoperator architectures  
[AAS PAPER 92-056] p 392 A93-50596
- Intelligent sensing and control for advanced teleoperation  
p 409 A93-54158
- A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever  
[NASA-CR-193301] p 365 N93-31844
- TASKS**
- Operator workload predictions for the revised AH-64A workload prediction model, volume 1  
[AD-A254198] p 30 N93-10261
- The effects of wearing protective chemical warfare combat clothing on human performance  
[AD-A250716] p 35 N93-12491
- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz  
[AD-A258136] p 120 N93-17985
- Dual-task training strategies and aging  
[AD-A258261] p 131 N93-18027
- Decision paths in complex tasks  
[NASA-CR-192121] p 132 N93-18359
- Application and validation of workload assessment techniques  
[AD-A264575] p 366 N93-32012
- Man-machine cooperation in advanced teleoperation  
p 366 N93-32106
- TAXONOMY**
- Errors in aviation maintenance - Taxonomy and control  
p 175 A93-27135
- Revision of the Wind River faunas, early Eocene of central Wyoming. X - Bunophorus (Mammalia, Artiodactyla)  
p 203 A93-33026
- TEAMS**
- The role of mental models in team performance in complex systems  
p 262 A93-34985
- Computer-supported collaborative work - A new agenda for human factors engineering  
p 348 A93-42841
- TECHNOLOGICAL FORECASTING**
- Helmet-mounted systems technology planning for the future  
p 227 A93-30052
- Water reclamation technology development for future long range missions  
[SAE PAPER 921351] p 306 A93-41510
- TECHNOLOGIES**
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-025] p 244 N93-25405
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-020] p 244 N93-25406
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-022] p 253 N93-25407
- TECHNOLOGY ASSESSMENT**
- Advances in training technology and the role of the instructor  
p 98 A93-18775
- Animal surgery in microgravity  
p 112 A93-24047
- Biomedical engineering - A means to add new dimension to medicine and research  
p 190 A93-28717
- Helmet-mounted systems test and evaluation process  
p 227 A93-30053
- I-NIGHTS and beyond --- Interim-Night Integrated Goggle and Head Tracking System  
p 227 A93-30054
- Intensified CCD sensor applications for helmet-mounted displays  
p 228 A93-30064
- Anthropometry for HMD design --- using three-dimensional quantitative morphology  
p 229 A93-30069
- Ultraviolet disinfection technology assessment  
[PB92-222868] p 64 N93-12983
- 1991 NASA Life Support Systems Analysis workshop  
[NASA-CR-4466] p 310 N93-27100
- 1992 NASA Life Support Systems Analysis workshop  
[NASA-CR-4467] p 310 N93-27101
- The ECLSS advanced automation project evolution and technology assessment  
p 312 N93-27723
- Assessment of the state of the art in life support environmental control for SEI  
p 315 N93-27978
- TECHNOLOGY UTILIZATION**
- The strategic role of automation and robotics for Columbus utilization  
p 181 A93-26567
- NASA's telerobotics research program  
p 263 A93-35566
- Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment  
p 350 A93-44895
- Machine vision in space  
p 395 A93-52641
- Design of a portable powered seat lift  
p 195 N93-22190
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-93-005] p 276 N93-28683
- JPRS report: Science and technology. Central Eurasia: Life sciences  
[JPRS-ULS-92-027] p 276 N93-28684
- TELEMETRY**
- Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise  
[AD-A259068] p 124 N93-19072
- TELEOPERATORS**
- Teleoperation to robotics at Langley Research Center  
p 101 A93-18569
- Eye slaved pointing system for teleoperator control  
p 101 A93-19090
- World model and its uncertainty in supervisory robot control  
p 183 A93-27027
- Virtual display aids for teleoperation  
p 183 A93-27029
- Real time proximity cues for teleoperation using model based force reflection  
p 184 A93-27033
- The Servicing Aid Tool --- teleoperated manipulation system for space shuttle orbiters  
p 192 A93-29116
- A teleoperation training simulator with visual and kinesthetic force virtual reality  
p 233 A93-33448
- Timing considerations of Helmet Mounted Display performance  
p 233 A93-33449
- A force-reflecting teleoperated hand system for the study of tactile sensing in precision manipulation  
p 263 A93-35536
- Visual specification of robot motion  
p 348 A93-42845
- Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation  
p 364 A93-45598
- Designs and development of a master-slave teleoperated robot  
p 390 A93-49357
- Transforming human hand motion for telemanipulation  
p 390 A93-49394
- Operator performance with alternative manual control modes in teleoperation  
p 390 A93-49397
- Synthetic experience - A proposed taxonomy  
p 390 A93-49398
- Interactive and cooperative sensing and control for advanced teleoperation  
p 391 A93-49443
- Optimizing dynamic transparency in teleoperator architectures  
[AAS PAPER 92-056] p 392 A93-50596
- A low cost helmet-mounted camera/display system for field testing teleoperator tasks  
p 408 A93-53122
- Intelligent sensing and control for advanced teleoperation  
p 409 A93-54158
- Integrated tools for teleoperated satellite repair  
p 409 A93-54845
- Operator vision aids for space teleoperation assembly and servicing  
p 33 N93-11981
- A study of the effects of lens focal length on remote driver performance  
[AD-A263191] p 321 N93-28941
- Man-machine cooperation in advanced teleoperation  
p 366 N93-32106
- Integration of advanced teleoperation technologies for control of space robots  
p 366 N93-32107
- Interactive and cooperative sensing and control for advanced teleoperation  
p 366 N93-32108
- TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development  
p 367 N93-32112

TELEROBOTICS

Space robotics and its man-machine interface  
p 27 A93-11204

Space telerobotic research and applications at Space Systems/Loral  
[AAS PAPER 91-046] p 62 A93-15588

Teleoperation to robotics at Langley Research Center  
p 101 A93-18569

Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms  
p 101 A93-18710

Collision avoidance of a multiple degree of redundancy manipulator operating through a window  
p 136 A93-23846

Research and development of sensing and manipulation techniques for space robotics on a testbed  
[AIAA PAPER 93-0794] p 136 A93-24873

Fusing human and machine skills for remote robotic operations  
p 137 A93-24994

Using tactile information in telerobotics  
p 138 A93-25482

Cooperative intelligent robotics in space II; Proceedings of the Meeting, Boston, MA, Nov. 12-14, 1991  
[SPIE-1612] p 182 A93-27001

Accuracy of locating circular features using machine vision --- for robotic systems  
p 182 A93-27022

World model and its uncertainty in supervisory robot control  
p 183 A93-27027

Emergence of telerobotic control enhancement from research in machine autonomy  
p 183 A93-27028

Virtual display aids for teleoperation  
p 183 A93-27029

A telerobotic virtual control system  
p 183 A93-27030

Incorporating robot vision in tele-autonomous systems  
p 184 A93-27031

Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments  
p 184 A93-27032

Real time proximity cues for teleoperation using model based force reflection  
p 184 A93-27033

Neutral buoyancy simulation of space telerobotic operations  
p 185 A93-27038

Evaluating robot procedures and tasks for the flight telerobotic servicer  
p 187 A93-27156

Flight Telerobotic Servicer legacy  
p 190 A93-29106

Ground operation of the mobile servicing system on Space Station Freedom  
p 190 A93-29107

Teleprogramming a cooperative space robotic workcell for Space Station  
p 190 A93-29109

Telerobotic system performance measurement - Motivation and methods  
p 191 A93-29114

Recent developments at the Goddard Engineering Test Bed --- for force reflecting teleoperation system  
p 192 A93-29115

Safety issues of manipulator systems under computer control  
p 192 A93-29121

A distributed telerobotics system for space operations  
p 192 A93-29132

Testbed for remote telepresence research  
p 193 A93-29135

Intelligent virtual interfaces for telerobotics  
p 193 A93-29136

Robot free-flyers in space extravehicular activity  
p 193 A93-29141

Flight Telerobotic Servicer legacy  
[AIAA PAPER 93-1157] p 231 A93-31032

An operator interface design for a telerobotic inspection system  
[AIAA PAPER 93-1160] p 231 A93-31034

Depth cue interaction in telepresence and simulated telemanipulation  
p 232 A93-33446

Operator vision aids for telerobotic assembly and servicing in space  
p 262 A93-35530

NASA's telerobotics research program  
p 263 A93-35566

Visual specification of robot motion  
p 348 A93-42845

Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation  
p 364 A93-45598

Transforming human hand motion for telemanipulation  
p 390 A93-49394

Physical and digital simulations for IVA robotics  
p 391 A93-49445

A procedure for the frequency analysis of telerobotic tasks data  
p 392 A93-50513

Ground-remote control for space station telerobotics with time delay  
[AAS PAPER 92-052] p 392 A93-50592

Telerobot control mode performance assessment  
[AAS PAPER 92-053] p 392 A93-50593

A manipulator control testbed - Implementation and applications  
[AAS PAPER 92-054] p 392 A93-50594

Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator  
p 407 A93-53038

Remote surface inspection system --- of large space platforms  
p 410 A93-55469

Research of a free-flying telerobot. IV - Development of dual-arm manipulation system  
p 411 A93-56254

Research of a free-flying telerobot. V - Handling a target with multi-arms  
p 411 A93-56255

Telemanipulation experiment using predictive display  
p 411 A93-56256

Skill compensation and dynamic coupling of macro/smart effector system  
p 411 A93-56260

Operator vision aids for space teleoperation assembly and servicing  
p 33 A93-11981

Design requirements for force reflecting master controllers  
p 139 A93-18035

Modeling of a full vision system using combined Visual/Haptic search for remote object identification  
[AD-A260977] p 266 A93-25867

EVA and telerobot interaction  
p 312 A93-27792

Man-machine cooperation in advanced teleoperation  
p 366 A93-32106

TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development  
p 367 A93-32112

TEMPERATURE CONTROL

Experimental research of the temperature and humidity control system for manned spacecraft cabin  
p 10 A93-13529

Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package  
[SAE PAPER 921122] p 291 A93-41314

Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom  
[SAE PAPER 921216] p 296 A93-41392

Environmental control of the Mini Pressurized Logistic Module  
[SAE PAPER 921281] p 302 A93-41449

Metabolic responses to simulated extravehicular activity  
[SAE PAPER 921303] p 282 A93-41468

ASDA - Advanced Suit Design Analyzer computer program  
[SAE PAPER 921381] p 308 A93-41539

Space Station Condensing Heat Exchanger biofilm formation and control evaluation  
[SAE PAPER 921383] p 308 A93-41541

The Minirion system for growth of small plants under controlled environment conditions  
p 358 A93-46471

Intelligent fault management for the Space Station active thermal control system  
p 32 A93-11930

Thermal control systems for low-temperature heat rejection on a lunar base  
[NASA-CR-191286] p 65 A93-13717

Conceptual design of a lunar base thermal control system  
p 68 A93-14003

Design of a radiator shade for testing in a simulated lunar environment  
[NASA-CR-192080] p 108 A93-17710

Preliminary design of a radiator shading device for a lunar outpost  
[NASA-CR-192016] p 139 A93-18019

Conceptual design of a thermal control system for an inflatable lunar habitat module  
[NASA-CR-192014] p 140 A93-18113

Environmental control and life support system  
p 311 A93-27718

Lunar base thermal management/power system analysis and design  
p 315 A93-27985

Manned lunar surface site  
p 316 A93-28033

TEMPERATURE EFFECTS

Changes in the phospholipid and cholesterol content of rat tissues during adaptation to high altitude at different environmental temperatures  
p 358 A93-47100

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate  
p 19 A93-11306

The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisco  
[DE92-019411] p 5 A93-11630

Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment  
[AD-A258502] p 129 A93-20400

Lunar base thermal management/power system analysis and design  
p 315 A93-27985

The effects of cockpit heat on aviator sleep parameters  
p 371 A93-32266

TEMPERATURE GRADIENTS

The values of the skin-temperature gradients and their significance for thermoregulation  
p 9 A93-12862

A second postcooling afterdrop - More evidence for a convective mechanism  
p 44 A93-14969

Measurement of behavioral thermoregulation  
[PB92-217033] p 172 A93-21046

TEMPERATURE MEASUREMENT

Adjustable temperature level of a physiological thermostat and the feasibility of its precise maintenance  
p 324 A93-43036

Monitoring core temperature during exercise - Ingestible sensor vs. rectal thermistor  
p 394 A93-52309

Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise  
[AD-A259068] p 124 A93-19072

TEMPERATURE PROFILES

Stimulation of lettuce productivity by manipulation of diurnal temperature and light  
p 327 A93-44879

TEMPERATURE SENSORS

Monitoring core temperature during exercise - Ingestible sensor vs. rectal thermistor  
p 394 A93-52309

TEMPORAL DISTRIBUTION

Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision  
[AD-A256059] p 58 A93-14580

TEMPORAL RESOLUTION

Spatio-temporal masking: Hyperacuity and local adaptation  
[AD-A257934] p 121 A93-18006

TENSION

Effect of cytoskeletal reagents on stretch activated ion channels  
[AD-A261089] p 245 A93-25764

TERRAIN

Perceptual dimensions of visual scenes relevant for simulating low-altitude flight  
[AD-A254645] p 57 A93-12662

Flight above a virtual world  
p 145 A93-19766

TERRAIN ANALYSIS

Multidimensional scaling analysis of terrain features relevant for simulating low-altitude flight  
p 188 A93-27186

An exploratory study of plan-view terrain displays for air carrier operations  
p 289 A93-39573

Line-of-sight determination in real-time simulations  
[AIAA PAPER 93-3567] p 406 A93-52666

Perceptual dimensions of visual scenes relevant for simulating low-altitude flight  
[AD-A254645] p 57 A93-12662

TERRESTRIAL PLANETS

Cometary supply of terrestrial organics - Lessons from the K/T and the present epoch  
p 109 A93-17981

Terrestrial and extraterrestrial sources of molecular homochirality  
p 110 A93-17986

TEST FACILITIES

Ground based simulation in test and evaluation education  
[AIAA PAPER 92-4066] p 24 A93-11252

Research and development of sensing and manipulation techniques for space robotics on a testbed  
[AIAA PAPER 93-0794] p 136 A93-24873

Recent developments at the Goddard Engineering Test Bed --- for force reflecting teleoperation system  
p 192 A93-29115

Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System  
p 202 A93-32651

An approach to the functional optimization of the CELSS Test Facility  
[SAE PAPER 921199] p 295 A93-41375

A simple hindlimb suspension apparatus  
p 398 A93-55168

Closed Ecological Life Support Systems (CELSS) Test Facility  
p 233 A93-22628

TEST PILOTS

Ground based simulation in test and evaluation education  
[AIAA PAPER 92-4066] p 24 A93-11252

The USAF Test Pilot School flight control systems curriculum  
[AIAA PAPER 92-4067] p 24 A93-11253

Aircrew acceptance of automation in the cockpit  
p 144 A93-19761

TEST STANDS

European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed  
[SAE PAPER 921200] p 295 A93-41376

Telescence testbedding for physiological experiments under hypobaric hypoxic conditions  
p 220 A93-24398

TETHERING

Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station  
[NASA-CR-192015] p 139 A93-17973

TETHERLINES

Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station  
[NASA-CR-192015] p 139 A93-17973

**TETRAZOLES**

- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] p 82 N93-17049

**THEOREMS**

- Two strikes against perfect phylogeny  
[RUU-CS-92-08] p 157 N93-20848

**THERAPY**

- The Canadian forces airsickness rehabilitation program, 1981-1991 p 89 A93-18042  
Image enhancement filters significantly improve reading performance for low vision observers p 167 A93-28723  
Management of trauma and emergency surgery in space p 167 A93-28734  
Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy p 211 A93-30278  
Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228  
Center of Excellence in laser medicine [DE92-018760] p 22 N93-11445  
AFRRRI reports [AD-A254581] p 49 N93-12649  
Bright light delivery system [NASA-CASE-MFS-28723-1] p 96 N93-17058  
Automatic detection of seizures with applications p 254 A93-25592  
Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 N93-28759  
Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 N93-29502

**THERMAL ANALYSIS**

- A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment [DE93-007428] p 264 N93-25318  
Lunar base thermal management/power system analysis and design p 315 N93-27985

**THERMAL COMFORT**

- Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronectin p 47 A93-16157  
Metabolic responses to simulated extravehicular activity [SAE PAPER 921303] p 282 A93-41468

**THERMAL DECOMPOSITION**

- Space habitat contaminant growth models. II p 345 A93-42094  
Kinetics of peptide hydrolysis and amino acid decomposition at high temperature --- space biochemical evolution p 411 A93-53289

**THERMAL DEGRADATION**

- Space habitat contaminant growth models. II p 345 A93-42094

**THERMAL ENERGY**

- Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793

**THERMAL ENVIRONMENTS**

- Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330  
Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729  
Changes in body fluid compartments during hypohydration and rehydration in heat-acclimated tropical subjects p 251 A93-35496

**THERMAL INSULATION**

- Lunar base thermal management/power system analysis and design p 315 N93-27985

**THERMAL PROTECTION**

- Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 A93-21161

**THERMAL RADIATION**

- Pyrolysis of vegetation by brief intense irradiation p 324 A93-42915

**THERMAL RESISTANCE**

- Biophysical model for handwear insulation testing [AD-A262926] p 320 N93-28884

**THERMAL SHOCK**

- Response of a mouse hybridoma cell line to heat shock, agitation, and sparging p 328 A93-44928  
Intracellular proteins produced by mammalian cells in response to environmental stress p 238 A93-44929

**THERMAL SIMULATION**

- Heat stress in protective clothing - Validation of a computer model and the Heat-Humidity Index (HHI) p 88 A93-18040

**THERMAL STRESSES**

- Effects of fatigue and heat stress on vigilance of workers in protective clothing p 177 A93-27173  
Cardiovascular responses during recovery from exercise and thermal stress p 212 A93-30282  
Thermal stress in US Air Force operations [AD-A255785] p 51 N93-14027

- Physiological stress from chemical defense clothing and equipment [AD-A255786] p 51 N93-14028

- The relationship between environmental conditions and UH-60 cockpit temperature [AD-A255918] p 69 N93-14090

**THERMOCHEMISTRY**

- Oxygen production on the Lunar materials processing frontier p 315 N93-27967

**THERMOELECTRICITY**

- Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774

**THERMONUCLEAR EXPLOSIONS**

- Pyrolysis of vegetation by brief intense irradiation p 324 A93-42915

**THERMOPHILES**

- Modern life at high temperatures --- evolution and taxonomy of extreme-thermophilic bacteria p 74 A93-18003  
Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821

**THERMOREGULATION**

- The values of the skin-temperature gradients and their significance for thermoregulation p 9 A93-12862  
Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients p 88 A93-18036  
Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats p 75 A93-18039  
Study of the functioning of the central and the peripheral contours of the thermoregulation system using a thermophysical model of the rabbit body p 111 A93-23075

- Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706

- Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729

- Adjustable temperature level of a physiological thermostat and the feasibility of its precise maintenance p 324 A93-43036

- The efficiency of thermoregulatory responses in the cooling of the organism p 325 A93-43136

- Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism p 360 A93-46968

- Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing --- nuclear, biological, and chemical assault protective garments p 389 A93-49218

- A review of models of the human temperature regulation system [AD-A258023] p 120 N93-17918

- Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise [AD-A259068] p 124 N93-19072

- Measurement of behavioral thermoregulation [PB92-217033] p 172 N93-21046

- Melatonin, the pineal gland, and circadian rhythms [AD-A264099] p 337 N93-31061

**THERMOSTATS**

- Adjustable temperature level of a physiological thermostat and the feasibility of its precise maintenance p 324 A93-43036

**THIN FILMS**

- Membrane technology for zero gravity life support systems [SAE PAPER 921320] p 304 A93-41482

**THIOUREAS**

- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 N93-28293

**THORAX**

- Windblast tolerance of human thorax and abdomen p 91 A93-19992

**THREE DIMENSIONAL BODIES**

- Two types of occlusion cues for the perception of 3-D illusory objects in binocular fusion p 222 A93-30239

- Why do we see three-dimensional objects? [AD-A259892] p 224 N93-23986

**THREE DIMENSIONAL MODELS**

- Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700

- 3-D target designation using two control devices and an aiding technique --- in fighter cockpits p 408 A93-53120

- Virtual environment display for a 3D audio room simulation p 408 A93-53125

- Coordinated action in 3-D space [AD-A249830] p 31 N93-10994

**THREE DIMENSIONAL MOTION**

- Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice p 186 A93-27145

- A weighted iterative algorithm for neuromagnetic imaging [DE92-040244] p 51 N93-13522

**THRESHOLDS (PERCEPTION)**

- Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555

**THROMBOSIS**

- Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775  
Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) [PB93-188670] p 338 N93-31158

**THROTTLING**

- Evaluation of finger motor reaction in flyer when handling throttle and stick p 29 A93-13539

**THROWING**

- Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806

**THRUST CONTROL**

- Comment on 'Optimum vehicle acceleration profile for minimum human injury' by C. P. Hatsell p 392 A93-49607

**THRUST VECTOR CONTROL**

- Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 N93-28870

**THRUSTORS**

- Simplified Aid For Crew Rescue (SAFR) p 313 N93-27793

**TIBIA**

- Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat p 327 A93-44844  
Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085

**TIME CONSTANT**

- Computer based analysis and synthesis of retinal function [AD-A260514] p 221 N93-24420

**TIME DEPENDENCE**

- The prediction of the adaptation of circadian rhythms to rapid time zone changes p 278 A93-39714  
Relating flying hours to aircrew performance: Evidence for attack and transport missions [AD-A253988] p 25 N93-10719  
Decision making in a dynamic task environment: The effect of time pressure [AD-A256557] p 58 N93-14602  
A decision-theoretic approach to the display of information for time-critical decisions: The Vista project p 367 N93-32152

**TIME LAG**

- Incorporating display limitations in a model-based analysis of flight simulator fidelity [AIAA PAPER 93-0859] p 137 A93-24923  
Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782

- Ground-remote control for space station telerobotics with time delay [AAS PAPER 92-052] p 392 A93-50592

- Integration of advanced teleoperation technologies for control of space robots p 366 N93-32107

**TIME MEASUREMENT**

- Time stress measurement devices for enhancement of onboard bit performance p 144 N93-19762

**TIME RESPONSE**

- Analyzing the path of responding in maze-solving and other tasks p 202 A93-32652

**TIME SERIES ANALYSIS**

- Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049  
Adaptive filters for monitoring localized brain activity from surface potential time series [DE93-003795] p 217 N93-22774

**TISSUES (BIOLOGY)**

- Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286

- Experimental research on the anti-irradiation effects of KW-1 - Protective effect on the 5-HT content of tissues in irradiated mice p 3 A93-13542

- Free radical attack - Biological test for human resistance capability p 39 A93-17434

- Altered cell function in microgravity p 79 A93-20660

- Characteristics of the effect of inert gases on in vivo tissue respiration p 112 A93-23152

- The problem of oxygen regimen in extreme conditions p 160 A93-27685

- Microgravity and bone adaptation at the tissue level p 170 A93-28761



- Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545
- Mechanisms of the anhypoxic effect of taurine p 325 A93-43073
- Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101
- Method for culturing mammalian cells in a perfused bioreactor [NASA-CASE-MSC-21293-2] p 4 N93-10109
- Method for culturing mammalian cells in a horizontally rotated bioreactor [NASA-CASE-MSC-21294-2] p 5 N93-10110
- Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 N93-13449
- Nerves and tissue repair [AD-A255299] p 53 N93-14535
- Autoradiographic distribution and applied pharmacological characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs [AD-A255607] p 54 N93-15009
- High density cell culture system [NASA-CASE-MSC-22060-1] p 114 N93-19037
- Cellular and tissue injury during nonfreezing cold injury and frostbite [AD-A260574] p 254 N93-25900
- Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 N93-28759
- The chronic effects of JP-8 jet fuel exposure on the lungs [AD-A264162] p 334 N93-30153
- TITAN**
- Titan p 114 N93-18553
- TOBACCO**
- Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318
- Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption [AD-A250648] p 23 N93-11893
- Tobacco and health of the pilot [ETN-93-93693] p 217 N93-23414
- Survey of smoking habits in the Spanish Air Force p 370 N93-32262
- TOILETS**
- Variable-Volume Flushing (V-VF) device for water conservation in toilets p 195 N93-22167
- TOLERANCES (PHYSIOLOGY)**
- The evaluation of tolerance to serious acute hypoxia in humans p 11 A93-13715
- Methodology for clinical testing of antiradiation means intended for manned space flight conditions p 249 A93-35236
- New aspects of using hyperbaric oxygenation in aviation medicine p 252 A93-36742
- Habituation to feline motion sickness p 328 A93-44900
- Understanding microwaves [ISBN 0-471-57567-4] p 357 A93-46300
- The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966
- Salivary total protein and experimental Coriolis sickness p 383 A93-49573
- Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115
- Prediction of motion sickness susceptibility p 403 A93-55940
- Effects of dextromethamphetamine on subjective fatigue [AD-A258252] p 119 N93-17822
- Stress resistance as a diagnostic category in air traffic controller selection [DLR-FB-92-13] p 219 N93-24092
- TOLUENE**
- Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents [AD-A255696] p 42 N93-14557
- TOMATOES**
- Final results of space exposed experiment developed for students p 329 N93-29702
- TOMOGRAPHY**
- Cognition in the brain: Investigations using positron emission tomography [AD-A254280] p 14 N93-10765
- Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764
- TOOLS**
- Integrated tools for teleoperated satellite repair p 409 A93-54845
- TORSION**
- Response characteristics of the human torsional vestibuloocular reflex p 215 A93-32774
- Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 N93-32364
- TORSO**
- Sudden loading and fatigue effects on the human spine [PB93-167526] p 286 N93-29199
- TOTAL QUALITY MANAGEMENT**
- A paradigm shift in Air Force medicine [AD-A258334] p 121 N93-18159
- TOXIC DISEASES**
- Beryllium toxicity - An update p 104 A93-20779
- TOXIC HAZARDS**
- Chemical and toxicological assessment of environmental contaminants in the Lunar-Chemical Analysis Laboratory p 62 A93-17433
- Beryllium toxicity - An update p 104 A93-20779
- Potential health effects of fume particles on the crew of spacecrafts [SAE PAPER 921387] p 308 A93-41545
- Potential health hazards from thermal degradation events - Particulate vs. gas phase effects [SAE PAPER 921388] p 282 A93-41546
- Toxic substances registry system: Index of material safety data sheets [NASA-TM-108582] p 172 N93-20998
- Monitoring human tissues for toxic substances [PB92-223239] p 173 N93-21498
- Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations [DOT/FAA/AM-93/8] p 283 N93-27158
- Evaluation of NO(x)-induced toxicity [AD-A261034] p 283 N93-28122
- Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment [FOA-A-40065-4.5] p 359 N93-32423
- TOXICITY**
- Cancer risk assessment with intermittent exposure p 171 A93-28766
- Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704
- Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305
- Fires on board aircraft: Toxicological risk in flight p 126 N93-19694
- Monitoring human tissues for toxic substances [PB92-223239] p 173 N93-21498
- The acute inhalation toxicity of pyrolysis products of halon 1301 [AD-A260874] p 254 N93-25629
- Development of novel models for describing multiple toxicity effects [AD-A264439] p 336 N93-30422
- TOXICITY AND SAFETY HAZARD**
- Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals [SAE PAPER 921410] p 310 A93-41564
- Control of infection in an international airline p 407 A93-52867
- Toxic substances registry system: Index of material safety data sheets [NASA-TM-108582] p 172 N93-20998
- Monitoring human tissues for toxic substances [PB92-223239] p 173 N93-21498
- Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations [DOT/FAA/AM-93/8] p 283 N93-27158
- TOXICOLOGY**
- Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705
- ECLSS medical support activities [NASA-CR-184429] p 23 N93-12427
- JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-024] p 40 N93-13033
- Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis [AD-A255582] p 95 N93-16041
- Toxicological investigations of flight accidents: Findings and methods p 126 N93-19695
- 27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696
- Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697
- TOXINS AND ANTITOXINS**
- Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- A core facility for the study of neurotoxins of biological origin [AD-A254359] p 50 N93-12945
- Immunoconjugates: Magic bullets for cancer therapy? p 253 N93-25567
- Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 N93-27989
- The AFOSR Workshop on the Future of EEG and MEG [AD-A264338] p 335 N93-30160
- TRACE CONTAMINANTS**
- Biochemically active layers for selective material detection sensors [MBB-Z-0440-92-PUB] p 158 N93-20959
- Computerized atmospheric trace contaminant control simulation for manned spacecraft [NASA-TM-108409] p 321 N93-28977
- TRACKING (POSITION)**
- Movement tracking performance as a function of required force level p 177 A93-27171
- Cardiorespiratory measures of workload during continuous manual performance p 160 A93-27192
- Comparative assessment of psychomotor performance - Target prediction by humans and macaques (Macaca mulatta) p 204 A93-33035
- Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446
- Timing considerations of Helmet Mounted Display performance p 233 A93-33449
- Eye movements and visual information processing [AD-A250198] p 24 N93-10278
- TRADEOFFS**
- Space Biology Initiative. Trade Studies, volume 1 [NASA-CR-190989] p 207 N93-23068
- Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069
- Space Biology Initiative. Trade Studies, volume 2 [NASA-CR-190990] p 208 N93-23079
- TRAFFIC CONTROL**
- A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321
- TRAINING ANALYSIS**
- Training analysis for the European Fighter Aircraft - 'A voyage into the unknown' p 98 A93-18769
- Advances in training technology and the role of the instructor p 98 A93-18775
- Questioning mechanisms during complex learning [AD-A247382] p 26 N93-11415
- TRAINING DEVICES**
- European astronaut candidates in training in the CIS p 256 A93-34593
- Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249
- The European astronauts training programme p 226 N93-24346
- TRAINING EVALUATION**
- Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519
- The realities of using visually coupled systems for training applications p 228 A93-30063
- Analyzing the path of responding in maze-solving and other tasks p 202 A93-32652
- Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249
- Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575
- Future military pilot training - A perspective of industry [AIAA PAPER 93-3601] p 404 A93-52689
- An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 N93-12509
- Training high performance skills using above real-time training [NASA-CR-192616] p 225 N93-24192
- Contribution of personality to the prediction of success in initial air traffic control specialist training [DOT/FAA/AM-93/4] p 259 N93-26138
- The air traffic controller's mental model and it's implications for equipment design and trainee selection p 341 N93-30322

- Training effectiveness assessment: Methodological problems and issues p 342 N93-30684
- TRAINING SIMULATORS**
- Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training p 98 A93-18773
- Visual augmentation and scene detail effects in flight training p 180 A93-27454
- The development and use of a generic nonnormal checklist with applications in ab initio and Introductory Advanced Qualification Programs p 180 A93-27456
- A teleoperation training simulator with visual and kinesthetic force virtual reality p 233 A93-33448
- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857
- TRAJECTORY ANALYSIS**
- Temporal Frequency Spectrum for describing and modeling motion perception p 232 A93-33250
- TRAJECTORY CONTROL**
- Fusing human and machine skills for remote robotic operations p 137 A93-24994
- Timing considerations of Helmet Mounted Display performance p 233 A93-33449
- Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot [AIAA PAPER 93-3863] p 392 A93-51449
- Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857
- TRAJECTORY OPTIMIZATION**
- Optimal manipulator trajectories for space robots [AAS PAPER 91-669] p 410 A93-55838
- Operator-assisted planning and execution of proximity operations subject to operational constraints p 194 N93-21436
- TRAJECTORY PLANNING**
- Space based robot manipulators - Dynamics of contact and trajectory planning for impact minimization p 135 A93-22827
- Visual display aid for orbital maneuvering - Design considerations p 135 A93-23518
- Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519
- Motion planning of a dual-arm free-floating manipulator with inertially fixed base [AIAA PAPER 93-3864] p 393 A93-51450
- TRANQUILIZERS**
- Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress p 253 A93-36745
- TRANSDUCERS**
- Development of a tactile perceived attitude transducer [AD-A253724] p 25 N93-11081
- Control system and method for prosthetic devices [NASA-CASE-MSC-21941-1] p 106 N93-17087
- TRANSFER FUNCTIONS**
- Perceptual effects of synthetic reverberation on three-dimensional audio systems p 257 A93-36583
- TRANSFER OF TRAINING**
- Transfer effects of scene content and crosswind in landing instruction p 62 A93-15665
- Contextual change and skill acquisition in visual search - Does the rate of change affect performance? p 178 A93-27187
- Automatic information processing and high performance skills [AD-A258473] p 132 N93-18273
- TRANSISTOR AMPLIFIERS**
- Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 N93-15825
- TRANSLATIONAL MOTION**
- Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363
- A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 N93-24490
- TRANSMISSION LINES**
- Joint HVAC transmission EMF environmental study [DE92-017863] p 43 N93-15211
- TRANSMITTERS**
- Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A256340] p 55 N93-15198
- Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A264829] p 336 N93-30613
- TRANSPARENCY**
- Visual processing of object velocity and acceleration [AD-A261048] p 265 N93-25778

**TRANSPIRATION**

Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models [SAE PAPER 921355] p 306 A93-41514

**TRANSPLANTATION**

Control and circadian behavior by transplanted suprachiasmatic nuclei [AD-A264553] p 335 N93-30382

**TRANSPORT AIRCRAFT**

Human factors in the 'glass cockpit' p 27 A93-11202

High-speed civil transport - Advanced flight deck challenges [AIAA PAPER 92-4231] p 28 A93-13357

On cockpit (crew) resource management p 223 A93-31490

Information management problems and their influence on cockpit equipment architecture of transport aircraft p 223 A93-31491

An exploratory study of plan-view terrain displays for air carrier operations p 289 A93-39573

Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport [SAE PAPER 921133] p 291 A93-41321

A method for predicting the work load of a flight engineer engaged in counteracting failures of functional systems of a transport aircraft p 364 A93-45688

Relating flying hours to aircrew performance: Evidence for attack and transport missions [AD-A253988] p 25 N93-10719

A study of illness related lost time in transport aircraft crewmembers [AD-A258193] p 132 N93-18298

**TRANSPORT PROPERTIES**

Ion transport across membranes under exposure of the organism to ionizing radiation --- Russian book [ISBN 5-12-001601-4] p 243 A93-35679

Application of RADTRAN to estimation of doses to persons in enclosed spaces [DE93-000758] p 97 N93-17230

**TRANSPORTATION**

Flight physiology - Clinical considerations p 164 A93-28690

**TREADMILLS**

Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898

Two techniques for measuring locomotion impact forces during zero G [NASA-TP-3305] p 217 N93-23410

**TREES (MATHEMATICS)**

Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848

A robust model for finding optimal evolutionary trees [DE93-010682] p 330 N93-30483

**TREMORS**

Electromyographic investigations of tremor in aquanauts in simulated immersions p 90 A93-18292

**TRENDS**

Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988 [AD-A260869] p 265 N93-25628

**TRITIUM**

Application of RADTRAN to estimation of doses to persons in enclosed spaces [DE93-000758] p 97 N93-17230

**TROPICAL REGIONS**

Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304

**TRYPTOPHAN**

Tryptophan availability modulates serotonin release from rat hypothalamic slices p 152 A93-27000

Serotonin release varies with brain tryptophan levels p 201 A93-32119

**TUBERCULOSIS**

Immunological parameters in current and former US Air Force personnel p 16 N93-11295

Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300

Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients [NASA-CR-192382] p 172 N93-20736

**TUMBLING MOTION**

TALON and CRADLE: Systems for the rescue of tumbling spacecraft and astronauts p 196 N93-22268

**TUMORS**

Measuring the metastatic potential of cancer cells p 244 N93-25566

Immunoconjugates: Magic bullets for cancer therapy? p 253 N93-25567

**UNDERGROUND STRUCTURES****TUNDRA**

Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake p 38 A93-16544

**TURBINE ENGINES**

Human factors applications in control systems design for ground testing of turbine engines p 409 A93-54410

**TURBOGENERATORS**

Lunar base thermal management/power system analysis and design p 315 N93-27985

**TWO PHASE FLOW**

Zero gravity phase separator technologies - Past, present and future [SAE PAPER 921160] p 293 A93-41342

Two phase fluid management for hydroponics [SAE PAPER 921163] p 294 A93-41345

Effects of air bubble contamination in recirculating water loop [SAE PAPER 921282] p 302 A93-41450

**TYPHOID**

Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304

Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate p 19 N93-11306

**TYROSINE**

Dopamine release in rat striatum - Physiological coupling to tyrosine supply p 152 A93-27050

Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens p 201 A93-32118

Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028

Tyrosine - Effects on catecholamine release p 204 A93-33038

**U****U.S.S.R.**

Digest of Russian Space Life Sciences, issue 33 [NASA-CR-3922(39)] p 244 N93-25195

**UH-60A HELICOPTER**

The relationship between environmental conditions and UH-60 cockpit temperature [AD-A255918] p 69 N93-14090

**ULCERS**

Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia [FOA-B-40422.4.4] p 275 N93-28212

**ULTRASONIC TESTS**

New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774

**ULTRAVIOLET ABSORPTION**

Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 N93-19399

**ULTRAVIOLET RADIATION**

The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216

Chloroflexus aurantiacus and ultraviolet radiation - Implications for Archean shallow-water stromatolites p 400 A93-55999

Ultraviolet disinfection technology assessment [PB92-222868] p 64 N93-12983

AFRR Reports --- Radiobiology [AD-A257231] p 80 N93-15965

Photobiological investigations on spores of streptomyces griseus [ESA-TT-1269] p 277 N93-29274

**ULYSSES MISSION**

Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774

**UNCONSCIOUSNESS**

Unconsciousness in flight and its prevention p 217 A93-32787

Acceleration-induced effects on baboon blood chemistry p 376 A93-49224

Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness [AD-A255485] p 54 N93-14789

**UNDERGROUND STRUCTURES**

Human safety in the lunar environment p 105 N93-16867

Evolving concepts of lunar architecture: The potential of subselene development p 107 N93-17447

Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 N93-17448

## UNDERWATER TESTS

### UNDERWATER TESTS

Zero-gravity underwater simulations for the Columbus programme - Outcome of the first campaigns

p 62 A93-17075

Statistically based decompression tables. 7: Selection and treatment of primary air and N2O2 data [AD-A259090]

p 172 N93-20587

### UNDERWATER VEHICLES

TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development

p 367 N93-32112

### UNITED KINGDOM

Aircrew acceptance of automation in the cockpit

p 144 N93-19761

### UNITED STATES

Achieving the promise of the bioscience revolution: The role of the Federal Government [PB93-139970]

p 244 N93-25457

### UNIVERSITY PROGRAM

Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021]

p 138 N93-17970

Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030]

p 139 N93-18018

Conceptual design of a thermal control system for an inflatable lunar habitat module

p 140 N93-18113

SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031]

p 140 N93-18153

Space life support engineering program [NASA-CR-192188]

p 141 N93-19039

Earth to lunar CELSS evolution [NASA-CR-192030]

p 351 N93-29727

Design of biomass management systems and components for closed loop life support systems

p 351 N93-29728

Exercise/recreation facility for a lunar or Mars analog

p 352 N93-29733

Automation of closed environments in space for human comfort and safety

p 352 N93-29734

Mars habitat [NASA-CR-192030]

p 352 N93-29747

GENESIS 2: Advanced lunar outpost

p 352 N93-29760

Center of Excellence in Biotechnology (Research) [AD-A263598]

p 330 N93-29915

### UREAS

Hydrothermal organic synthesis experiments [NASA-CR-191257]

p 41 N93-13457

13 C NMR spectra of allosteric effectors of hemoglobin [AD-A262979]

p 284 N93-28293

### URINE

Blood and urine responses to ingesting fluids of various salt and glucose concentrations --- to combat orthostatic intolerance

p 83 A93-17528

An update on the readiness of vapor compression distillation for spacecraft wastewater processing [SAE PAPER 921114]

p 290 A93-41307

Concept of waste transferring mechanisms [SAE PAPER 921239]

p 297 A93-41412

Extraction of potable water from urine for space applications

p 345 A93-42121

Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans

p 381 A93-49293

The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident

p 49 N93-12612

Distribution of human waste samples in relation to sizing waste processing in space

p 68 N93-14001

Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program

p 218 N93-24088

Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols

p 359 N93-32354

Microbiological and corrosion analysis of three urine pretreatment regimes with titanium 6Al-4V [NASA-CR-192575]

p 372 N93-32356

### UTRICLE

Micromotional studies of utricular and canal afferents [NASA-CR-192703]

p 207 N93-22800

## V

### VACCINES

Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518]

p 14 N93-11283

Vaccination against Hepatitis B: The Italian strategy

p 15 N93-11289

HIV variability and perspectives of a vaccine

p 16 N93-11294

Communicable diseases: A major burden of morbidity and mortality

p 18 N93-11300

Susceptibility in USAF recruits to vaccine preventable diseases

p 18 N93-11301

Absence of protective immunity against diphtheria in a large proportion of young adults

p 18 N93-11302

Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination

p 18 N93-11303

Immunization of personnel traveling to a destination in tropical countries: French position

p 19 N93-11304

Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits

p 19 N93-11305

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate

p 19 N93-11306

Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens

p 20 N93-11308

Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171

p 20 N93-11309

Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems

p 20 N93-11310

### VACUUM

Photobiological investigations on spores of streptomyces griseus [ESA-TT-1269]

p 277 N93-29274

### VACUUM CHAMBERS

Growing wheat to maturity in reduced gas pressures [NASA-CR-193245]

p 277 N93-29216

### VALIDITY

Phases of the project development and examination methodologies

p 343 N93-31231

### VALSALVA EXERCISE

The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration

p 118 A93-25204

### VAN DE GRAAFF ACCELERATORS

Radiation physics, biophysics, and radiation biology [DE92-013673]

p 6 N93-12266

### VASOCONSTRICTION

Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients

p 88 A93-18036

Effect of acute hypoxia exposures on plasma endothelin in rats

p 199 A93-30442

Effects of cold injury on serum angiotensin converting enzyme activities in rats

p 199 A93-30444

Norepinephrine content in discrete brain areas and neurohypophysial vasopressin in rats after a 9-d spaceflight (SLS-1)

p 273 A93-41167

Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin

p 120 N93-17900

### VEGETABLES

Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design [SAE PAPER 921356]

p 307 A93-41515

Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357]

p 307 A93-41516

Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce

p 357 A93-46468

Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation

p 357 A93-46469

The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions

p 394 A93-52410

Crop growth and associated life support for a lunar farm

p 67 N93-13994

Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model

p 245 N93-26069

### VEGETATION

Pyrolysis of vegetation by brief intense irradiation

p 324 A93-42915

### VEGETATION GROWTH

Hazard and risk assessment for surface components of a lunar base Controlled Ecological Life Support System

p 302 A93-41451

Design and evaluation of a payload to support plant growth onboard COMET 1 [SAE PAPER 921389]

p 308 A93-41547

A matrix-based porous tube water and nutrient delivery system [SAE PAPER 921390]

p 309 A93-41548

Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (Avena sativa)

p 358 A93-46472

Some qualitative and quantitative aspects of the fast-rotating clinostat as a research tool --- for effects of weightlessness on biological objects

p 375 A93-49209

How well does the clinostat mimic the effect of microgravity on plant cells and organs?

p 376 A93-49213

Engineering verification of the biomass production chamber

p 67 N93-13996

The production and use of aeroponically grown inocula of VAM fungi in the native plant nursery

p 43 N93-15208

Characterization of the water soluble component of inedible residue from candidate CELSS crops [NASA-TT-107557]

p 139 N93-18111

Active synthetic soil [NASA-CASE-MS-21954-1-NP]

p 114 N93-19054

A membrane-based subsystem for water-vapor recovery from plant-growth chambers

p 149 N93-20065

Growing wheat to maturity in reduced gas pressures [NASA-CR-193245]

p 277 N93-29216

### VEINS

Correlation between the lymph dynamics and venous pressure during short-term antithrostatic effects

p 325 A93-43070

### VELOCITY

Visual processing of object velocity and acceleration [AD-A261048]

p 265 N93-25778

### VELOCITY ERRORS

Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system

p 34 N93-12211

### VENTILATION

Maximal lung ventilation and forced expiration rate under hyperbaria

p 76 A93-18297

Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation

p 77 A93-18301

Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress [AD-A258552]

p 148 N93-19955

### VENUS (PLANET)

Venus: A search for clues to early biological possibilities

p 113 N93-18549

### VENUS ATMOSPHERE

The life span of the biosphere revisited

p 149 A93-21847

Venus: A search for clues to early biological possibilities

p 113 N93-18549

### VERBAL COMMUNICATION

Insights into pilot situation awareness using verbal protocol analysis

p 175 A93-27138

The effect of type of task, degree of integration, and modality on the performance of concurrent tasks

p 175 A93-27140

Electronic map interpretation in a dual-task context

p 176 A93-27144

Comparing performance on implicit memory tests [AD-A258168]

p 131 N93-17921

Spontaneous discovery and use of categorical structure [AD-A261658]

p 260 N93-26364

### VERTEBRATES

Computer based analysis and synthesis of retinal function [AD-A260514]

p 221 N93-24420

### VERTICAL LANDING

Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft

p 45 A93-15175

### VERTICAL MOTION SIMULATORS

Line-of-sight determination in real-time simulations [AIAA PAPER 93-3567]

p 406 A93-52666

A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881]

p 236 N93-24490

### VERTICAL ORIENTATION

A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite

p 240 A93-35215

Effects of long-term weightlessness on roll circarvection

p 279 A93-39725

Spatial orientation in weightless environments

p 388 A93-49563

Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation

p 226 N93-24366

### VERTICAL PERCEPTION

Accuracy of aimed arm movements in changed gravity

p 56 A93-16159

OPTOVERT: An AUSTROMIR 91 experiment. Orientational effects from optokinetic stimulation

p 159 A93-26571

- Effects of visually induced self-motion perception (vection) on upright standing posture p 214 A93-31531
- Optovert: An AustroMir-1991 experiment. Orientation effects from optokinetic stimulation p 226 N93-24366
- VERTICAL TAKEOFF**
- Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft p 45 A93-15175
- VERY LARGE SCALE INTEGRATION**
- Silicon neuron [AD-A255091] p 50 N93-12756
- Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision [AD-A256059] p 58 N93-14580
- Electrically modifiable nonvolatile SONOS synapses for electronic neural networks [AD-A258318] p 122 N93-18252
- VESTIBULAR NYSTAGMUS**
- Influence of gravito-inertial force level on vestibular and visual velocity storage in yaw and pitch p 165 A93-28701
- Antagonistic otolith-visual units in cat vestibular nuclei p 199 A93-30511
- The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219
- Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226
- Vestibulo-oculomotor responses under conditions of immersion hypokinesia p 251 A93-35256
- Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 386 A93-52405
- VESTIBULAR TESTS**
- Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis p 7 A93-10329
- Response characteristics of semicircular canal in cats under linear acceleration p 3 A93-13536
- The effects of cephalad body fluid redistribution on the ultrastructure of the vestibular apparatus of guinea pig p 4 A93-13717
- A four-pole electric swing and its application to the research on vestibular function p 103 A93-19999
- Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700
- Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653
- Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176
- Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural p 203 A93-32773
- Response characteristics of the human torsional vestibuloocular reflex p 215 A93-32774
- Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226
- Vestibular afferent responses to microrotational stimuli p 328 A93-44930
- Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572
- Medical evaluation of spatial disorientation mishaps p 134 A93-19703
- Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 N93-22800
- Neural processing of gravity information [NASA-CR-192766] p 209 N93-23233
- VESTIBULES**
- The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863
- Human vestibular function and weightlessness p 84 A93-17531
- Alterations of proprioceptive function in the weightless environment p 86 A93-17549
- Vestibular problems in diving and in space p 169 A93-28747
- Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750
- Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670
- Role of the vestibular end organs in experimental motion sickness - A primate model p 399 A93-55933
- Neurochemistry and pharmacology of motion sickness in nonhuman species p 399 A93-55934
- Statistical prediction of space motion sickness p 403 A93-55943
- Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 N93-22800
- VESTS**
- Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330
- Evaluation of two microclimate cooling air vests on a heated mannequin [AD-A259410] p 194 N93-21269
- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 N93-29471
- VETERINARY MEDICINE**
- Fuzzy neural network methodology applied to medical diagnosis p 334 N93-29546
- VIBRATION**
- Acoustical and vibratory stimuli interdependencies and their applications in simulation and cue synchronization [AIAA PAPER 93-3562] p 406 A93-52662
- Helmeted head and neck dynamics under whole-body vibration p 264 N93-25531
- VIBRATION DAMPING**
- Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222
- Active vibration damping of the Space Shuttle remote manipulator system p 231 A93-31993
- Human-in-the-loop evaluation of RMS Active Damping Augmentation [AIAA PAPER 93-3875] p 393 A93-51460
- Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970
- VIBRATION EFFECTS**
- Gravito-inertial force level affects the appreciation of limb position during muscle vibration p 169 A93-28744
- Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263
- Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670
- Pilot investigation - Nominal crew induced forces in zero-g [SAE PAPER 921155] p 293 A93-41338
- Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 N93-32237
- VIBRATION ISOLATORS**
- Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970
- Vibration isolation p 365 N93-31458
- VIBRATION PERCEPTION**
- Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286
- The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863
- Study on mechanical characteristics of viscera in dogs p 3 A93-13540
- Investigation of nonlinear dynamic responses to random vibration in dogs p 4 A93-13722
- VIBRATION TESTS**
- Design guide for the ergonomic aspects of helicopter crew seating [ISVR-TR-209] p 65 N93-13464
- A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849
- VIBRATIONAL STRESS**
- Comparison between VDV and a(rms) using simulated impulsive vibration p 91 A93-19991
- VIDEO COMMUNICATION**
- Night vision goggle training: Development and production of six video programs [AD-A258529] p 148 N93-20050
- Evolving technologies for Space Station Freedom computer-based workstations p 313 N93-27794
- VIDEO DATA**
- Visual data interpretation; Proceedings of the Meeting, San Jose, CA, Feb. 10-11, 1992 [SPIE-1668] p 391 A93-49451
- Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 N93-25736
- VIDEO EQUIPMENT**
- Intensified CCD sensor applications for helmet-mounted displays p 228 A93-30064
- System for generating dynamic video imagery for human factors research [AD-A248675] p 31 N93-11743
- United States Army space experiment 601 [AD-A261460] p 260 N93-26353
- Method of encouraging attention by correlating video game difficulty with attention level [NASA-CASE-LAR-15022-1] p 288 N93-28128
- VIDEO SIGNALS**
- High-resolution contrast control on a video display: Method and calibration [AD-A256552] p 60 N93-15400
- VIEWING**
- Visual perception of structure from motion [AD-A253235] p 26 N93-11503
- Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104
- VIGNETTING**
- A tutorial on exit pupils and eye rotation with virtual image optical displays [AD-A262399] p 333 N93-29400
- VIKING MARS PROGRAM**
- Mars: A reassessment of its interest to biology p 113 N93-18550
- VIRAL DISEASES**
- Inactivation of a model coliphage virus in water by iodine [SAE PAPER 921361] p 274 A93-41520
- Clinical types of Hepatitis B p 15 N93-11286
- Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287
- Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations p 15 N93-11288
- Vaccination against Hepatitis B: The Italian strategy p 15 N93-11289
- VIRTUAL PROPERTIES**
- The realities of using visually coupled systems for training applications p 228 A93-30063
- VIRTUAL REALITY**
- Spatial orientation and dynamics in virtual reality systems - Lessons from flight simulation p 178 A93-27185
- Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443
- The design of virtual spaces and virtual environments p 232 A93-33445
- Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446
- Human behavior in virtual environments p 233 A93-33447
- A teleoperation training simulator with visual and kinesthetic force virtual reality p 233 A93-33448
- Timing considerations of Helmet Mounted Display performance p 233 A93-33449
- Visual search in virtual environments p 233 A93-33450
- A computational model for the stereoscopic optics of a head-mounted display p 390 A93-49393
- Synthetic experience - A proposed taxonomy p 390 A93-49398
- Profile analysis of simulator sickness symptoms - Application to virtual environment systems p 381 A93-49399
- Virtually induced motion sickness in virtual environments p 381 A93-49401
- Cybersickness - Perception of self-motion in virtual environments p 381 A93-49402
- Mental rotation - A key to mitigation of motion sickness in the virtual environments? p 387 A93-49404
- Will simulation sickness slow down the diffusion of virtual environment technology? p 391 A93-49405
- A literature survey for virtual environments - Military flight simulator visual systems and simulator sickness p 387 A93-49406
- Visual data interpretation; Proceedings of the Meeting, San Jose, CA, Feb. 10-11, 1992 [SPIE-1668] p 391 A93-49451
- Virtual environment display for a 3D audio room simulation p 408 A93-53125
- Virtual landings --- developing Enhanced Vision Systems for VFR p 410 A93-54868
- Advanced technology for portable personal visualization [AD-A253808] p 32 N93-11783
- Developing virtual cockpits p 145 N93-19764
- Panoramic cockpit displays p 145 N93-19765
- Flight above a virtual world p 145 N93-19766
- Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 N93-24738
- Virtual interface applications for airborne weapons systems p 318 N93-28858
- Head mounted displays for virtual reality [AD-A263498] p 322 N93-29340
- Exercise/recreation facility for a lunar or Mars analog p 352 N93-29733
- A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks p 367 N93-32151
- VIRULENCE**
- Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 N93-27989
- Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 N93-28199
- VIRUSES**
- Roles of water molecules in bacteria and viruses p 243 A93-36555

- Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304  
Epidemiologic research in Antarctica p 81 N93-16800

**VISCERA**

- Study on mechanical characteristics of viscera in dogs p 3 A93-13540  
Effects of positive acceleration on the microcirculation of rabbit conjunctiva, mesentery, skin, and pia mater p 4 A93-13709

**VISCOELASTICITY**

- Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222

**VISIBILITY**

- Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990  
Engineering the visibility of small features on electronic flight displays p 144 N93-19758  
Sensory sensitivities and discriminations and their roles in aviation [AD-A259742] p 224 N93-23479

**VISIBLE SPECTRUM**

- Equipment, more or less ready to be used in helicopters p 148 N93-19785

**VISION**

- Human vision, visual processing, and digital display II; Proceedings of the Meeting, San Jose, CA, Feb. 27-Mar. 1, 1991 [SPIE-1453] p 137 A93-25363  
Image enhancement filters significantly improve reading performance for low vision observers p 167 A93-28723  
Contact lenses in aviation - The Marine Corps experience p 289 A93-41172  
Prevalence of corrective lens wear in Royal Australian Air Force flight crews p 289 A93-41173  
Machine vision in space p 395 A93-52641  
Eye movements and visual information processing [AD-A250198] p 24 N93-10278  
A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321  
Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566  
The prevalence of artificial lens implants in the civil airman population [DOT/FAA/AM-92/14] p 253 N93-25214  
Receptor and neural aliasing [AD-A261438] p 261 N93-26489  
Armstrong Laboratory space visual function tester program p 284 N93-28739  
Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1) p 284 N93-28740  
Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2) p 284 N93-28741  
Effect of microgravity on the visual near point: Visual Function Tester-Model 4 (VFT-4) p 284 N93-28742  
Analysis of visual loss from retinal lesions [AD-A264692] p 336 N93-30494  
Photoreceptors regulating circadian behavior: A mouse model [AD-A264881] p 337 N93-30908  
The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 N93-31233

**VISORS**

- Designing the right visor p 181 A93-26885  
Toward the ideal military aviation sunglass [AD-A258200] p 140 N93-18200  
Multi-function visor p 146 N93-19770  
Helmet visor support apparatus [AD-D015684] p 351 N93-29606

**VISUAL ACUITY**

- Spatial contrast sensitivity through aviator's night vision imaging system p 393 A93-52300  
Photo-Refractive Keratectomy (PRK) - Threat or millennium for military pilots? p 401 A93-55169  
Analysis of retinal function following laser irradiation [AD-A255649] p 52 N93-14163  
Higher order mechanisms of color vision [AD-A256369] p 60 N93-15329  
Night vision manual for the flight surgeon [AD-A257059] p 104 N93-15716  
Retinal information processing for minimum laser lesion detection and cumulative damage [AD-A259195] p 171 N93-20563  
Armstrong Laboratory space visual function tester program p 284 N93-28739  
Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1) p 284 N93-28740

**VISUAL AIDS**

- The design of virtual spaces and virtual environments p 232 A93-33445  
Operator vision aids for telerobotic assembly and servicing in space p 262 A93-35530  
Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981  
Sensory sensitivities and discriminations and their roles in aviation [AD-A259742] p 224 N93-23479

**VISUAL CONTROL**

- Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004  
Operator vision aids for telerobotic assembly and servicing in space p 262 A93-35530  
Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks p 287 A93-41166

**VISUAL DISCRIMINATION**

- The effects of pyridostigmine bromide on visual performance p 87 A93-18034  
Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323  
Computer simulations of object discrimination by visual cortex [AD-A253345] p 12 N93-10271  
A spurious pop-out in visual search [AD-A256548] p 57 N93-14267  
Institute for the Study of Human Capabilities [AD-A256091] p 69 N93-14427  
Higher order mechanisms of color vision [AD-A256369] p 60 N93-15329  
Toward the ideal military aviation sunglass [AD-A258200] p 140 N93-18200

**VISUAL FIELDS**

- Visual scene effects on the somatogravic illusion p 88 A93-18035  
Human low vision image warping - Channel matching considerations p 231 A93-32444  
Eye movements and visual information processing [AD-A250198] p 24 N93-10278  
The detection of lateral motion by US Navy jet pilots [AD-A258115] p 120 N93-17896  
Visual perception of elevation [AD-A261394] p 259 N93-26307  
Neuropsychological components of object identification [AD-A261449] p 259 N93-26347  
Receptor and neural aliasing [AD-A261438] p 261 N93-26489  
Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

**VISUAL FLIGHT**

- Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155

**VISUAL FLIGHT RULES**

- Active control versus passive observation in a simulated flight task p 179 A93-27196

**VISUAL PERCEPTION**

- Human speed perception is contrast dependent p 55 A93-14119  
Human vestibular function and weightlessness p 84 A93-17531  
Factors influencing perceived angular velocity p 97 A93-17800  
Choosing specifiers - An evaluation of the basic tasks model of graphical perception p 102 A93-19985  
Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653  
Colour is what the eye sees best p 159 A93-26245  
Human visual performance model for crewstation design p 182 A93-26887  
Human speed perception is contrast dependent p 174 A93-26950  
Human factors issues in the use of night vision devices p 189 A93-27193  
Half-squaring in responses of cat striate cells p 157 A93-28748  
Two types of occlusion cues for the perception of 3-D illusory objects in binocular fusion p 222 A93-30239  
Effects of visually induced self-motion perception (vection) on upright standing posture p 214 A93-31531  
Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176  
Visual and somesthetic influences on postural orientation in the median plane p 224 A93-32782  
Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size p 224 A93-32788  
Things that go bump in the light - On the optical specification of contact severity p 256 A93-35099

**Microwaves and the visual analyzer**

- p 250 A93-35247  
Visual cues in low-level flight - Implications for pilotage, training, simulation, and enhanced/synthetic vision systems p 264 A93-35918  
The impact of visual noise on spatial orientation p 257 A93-36229  
Analysis of factors influencing contrast vision in normal eyes p 332 A93-44848  
The role of spatial attention in visual word processing p 339 A93-44922  
Perceptual bias for forward-facing motion p 339 A93-44940  
A computer simulation model for attention distribution and event generation p 340 A93-45323  
Spatial orientation, adaptation, and motion sickness in real and virtual environments p 382 A93-49403  
Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 A93-51959  
False cue detection thresholds in flight simulation [AIAA PAPER 93-3578] p 407 A93-52674  
High-resolution inserts in wide-angle head-mounted stereoscopic displays p 408 A93-53121  
Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167  
Eye movements and visual information processing [AD-A250198] p 24 N93-10278  
Perception of lightness and brightness in complex patterns [AD-A254093] p 25 N93-10658  
Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses [AD-A254129] p 13 N93-10661  
Coordinated action in 3-D space [AD-A249830] p 31 N93-10994  
Visual psychophysics of egomotion [AD-A248349] p 26 N93-11488  
Visual perception of structure from motion [AD-A253235] p 26 N93-11503  
The effects of luminance boundaries on color perception [AD-A250705] p 22 N93-11841  
A spurious pop-out in visual search [AD-A256548] p 57 N93-14267  
Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity [AD-A255989] p 58 N93-14416  
Psychophysical analyses of perceptual representations [AD-A255432] p 58 N93-14510  
The perception of articulated motion: Recognizing moving light displays [AD-A256046] p 59 N93-14660  
Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks [AD-A257711] p 100 N93-17684  
The detection of lateral motion by US Navy jet pilots [AD-A258115] p 120 N93-17896  
Spatio-temporal masking: Hyperacuity and local adaptation [AD-A257934] p 121 N93-18006  
Toward the ideal military aviation sunglass [AD-A258200] p 140 N93-18200  
Validity of clinical color vision tests for air traffic control specialists [AD-A258219] p 123 N93-18301  
Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104  
Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681  
Engineering the visibility of small features on electronic flight displays p 144 N93-19758  
Sensory sensitivities and discriminations and their roles in aviation [AD-A259742] p 224 N93-23479  
Theory of synaptic plasticity in visual cortex [AD-A260052] p 224 N93-23960  
Why do we see three-dimensional objects? [AD-A259892] p 224 N93-23986  
Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238  
Eye movements and visual information processing [AD-A259955] p 225 N93-24297  
Human visual limitations on suprathreshold contrast perception through ANVIS [AD-A259970] p 226 N93-24431  
Visual processing of object velocity and acceleration [AD-A261048] p 265 N93-25778  
Visual perception of elevation [AD-A261394] p 259 N93-26307  
Neural basis of motion perception [AD-A261452] p 260 N93-26349

- Coordinated action in 3-D space  
[AD-A261418] p 261 N93-26449
- Effect of microgravity on the visual near point: Visual Function Tester-Model 4 (VFT-4) p 284 N93-28742
- Head mounted displays for virtual reality  
[AD-A263498] p 322 N93-29340
- A tutorial on exit pupils and eye rotation with virtual image optical displays  
[AD-A262399] p 333 N93-29400
- Computing with neural maps: Application to perceptual and cognitive function  
[AD-A264056] p 341 N93-30033
- Representations of shape in object recognition and long-term visual memory  
[AD-A264342] p 341 N93-30163
- Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights  
[AD-A264626] p 341 N93-30426
- Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight  
[AD-A264661] p 341 N93-30542
- The dynamics of visual representation, attention, encoding, and retrieval processes  
[AD-A264674] p 342 N93-30543
- Discomfort glare from high-intensity discharge headlamps: Effects of context and experience  
[PB93-174720] p 336 N93-30659
- An algorithm for simple and complex feature detection: From retina to primary visual cortex  
[AD-A264306] p 337 N93-30897
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability  
p 344 N93-31236
- VISUAL PIGMENTS**
- Studies towards the crystallization of the rod visual pigment rhodopsin p 1 A93-11150
- The pigmentary dispersion disorder in USAF aviators  
p 87 A93-18033
- VISUAL SIGNALS**
- Super auditory localization for improved human-machine interfaces  
[AD-A254699] p 34 N93-12229
- Theory of signal detection and its application to visual target acquisition: A review of the literature  
[AD-A262920] p 288 N93-28307
- VISUAL STIMULI**
- The development of a visual color checkerboard stimulator p 30 A93-13723
- Anisotropy in an ambiguous kinetic depth effect  
p 55 A93-14097
- Involuntary attentional capture by abrupt onsets  
p 97 A93-17974
- Display format and highlight validity effects on search performance using complex visual displays  
p 187 A93-27160
- S-R compatibility effects with orthogonal stimulus and response dimensions p 179 A93-27194
- Perceptual bias for forward-facing motion  
p 339 A93-44940
- Spatial orientation in weightless environments  
p 388 A93-49563
- Psychophysiological study on the effects of co-existence of lines for detecting dot target p 405 A93-55330
- Role of the vestibular end organs in experimental motion sickness - A primate model p 399 A93-55933
- Space motion sickness monitoring experiment - Spacelab 1 p 403 A93-55941
- Simulator sickness p 403 A93-55944
- The effects of luminance boundaries on color perception  
[AD-A250705] p 22 N93-11841
- Perceptual dimensions of visual scenes relevant for simulating low-altitude flight  
[AD-A254645] p 57 N93-12662
- The perception of articulated motion: Recognizing moving light displays  
[AD-A256046] p 59 N93-14660
- Enhanced performance using physiological feedback  
[AD-A258006] p 130 N93-17816
- VISUAL TASKS**
- Locus of the single-channel bottleneck in dual-task interference p 55 A93-14098
- Graphical displays - Implications for divided attention, focused attention, and problem solving  
p 102 A93-19984
- Choosing specifiers - An evaluation of the basic tasks model of graphical perception p 102 A93-19985
- Chromaticity and luminance as coding dimensions in visual search p 103 A93-19989
- Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990
- Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions  
p 187 A93-27155

- Contextual change and skill acquisition in visual search - Does the rate of change affect performance?  
p 178 A93-27187
- Effects of display luminance on the recognition of color symbols on similar color backgrounds  
p 189 A93-27191
- Overconfidence, preview, and probability in strategic planning p 179 A93-27195
- Effects of laser glare on visual search performance  
p 180 A93-28158
- Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements  
p 287 A93-40772
- The role of spatial attention in visual word processing  
p 339 A93-44922
- Disruption and maintenance of skilled visual search as a function of degree of consistency p 389 A93-52501
- Design of a reading test for low vision image warping  
p 400 A93-53025
- Psychophysiological study on the effects of co-existence of lines for detecting dot target p 405 A93-55330
- A spurious pop-out in visual search  
[AD-A25548] p 57 N93-14267
- Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity  
[AD-A255989] p 58 N93-14416
- Enhanced performance using physiological feedback  
[AD-A258006] p 130 N93-17816
- Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 N93-17817
- Duration of alpha suppression increases with angle in a mental rotation task  
[AD-A261592] p 260 N93-26435
- Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2) p 284 N93-28741
- Human capabilities and limitations in situation awareness p 319 N93-28863
- A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks  
p 367 N93-32151
- VITAMINS**
- Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle, and kidney in suspended rats  
p 77 A93-19994
- VOICE COMMUNICATION**
- Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21)  
[AD-A253393] p 30 N93-10217
- Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)  
[AD-A253394] p 30 N93-10288
- The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft p 146 N93-19772
- Principles for integrating voice I/O in a complex interface p 146 N93-19774
- G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775
- The clearance test: A computer generated process for acquisition of auditive short term sensitivity  
p 343 N93-31234
- VOICE CONTROL**
- Controllability of the voice command system - A preliminary study p 27 A93-11287
- Ocular attention-sensing interface system  
[NASA-CR-190884] p 65 N93-13450
- VOLATILITY**
- Experimental study of volatile metabolites of human body p 11 A93-13711
- VOLCANOES**
- An efficient lightning energy source on the early earth  
p 73 A93-17823
- VOLCANOLOGY**
- Life in hot springs and hydrothermal vents  
p 243 A93-36559
- VOMITING**
- Central neurophysiological and neurochemical vomiting mechanisms (Review of the literature)  
p 240 A93-35232
- Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711
- Xylazine emesis, yohimbine and motion sickness susceptibility in the cat p 324 A93-42450
- Buspirone blocks cisplatin-induced emesis in cats  
p 324 A93-42668
- Applied chemical engineering thermodynamics  
[ISBN 0-387-54759-2] p 357 A93-46075
- Understanding microwaves  
[ISBN 0-471-57567-4] p 357 A93-46300
- Motion sickness and evolution p 399 A93-55930
- The central nervous connections involved in motion induced emesis p 399 A93-55931

**VULNERABILITY**

- Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA  
[DE93-001923] p 321 N93-28942

**W****WAKEFULNESS**

- Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots  
p 401 A93-55163
- The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness  
[AD-A263033] p 283 N93-27923

**WALKING**

- Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions  
p 48 A93-16161
- Energetics of walking and running - Insights from simulated reduced-gravity experiments  
p 116 A93-21687
- Effects of unilateral selective hypergravity stimulation on gait  
p 386 A93-52407
- Compliant walker  
[NASA-CASE-GSC-13348-2] p 53 N93-14708

**WALL FLOW**

- Wall shear stress estimates in coronary artery constrictions  
p 170 A93-28759

**WALLS**

- Vertical regolith shield wall construction for lunar base applications  
p 107 N93-17446

**WARFARE**

- The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm  
[AD-A258156] p 132 N93-18294
- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm  
[AD-A259243] p 171 N93-20580

**WARNING SYSTEMS**

- Monitoring of pilot actions as part of a knowledge-based system for pilot assistance p 59 N93-15184
- Model-based reasoning applied to cockpit warning systems p 147 N93-19778

**WASTE DISPOSAL**

- Concept of waste transferring mechanisms  
[SAE PAPER 921239] p 297 A93-41412
- OCAM - A CELSS modeling tool: Description and results --- Object-oriented Controlled Ecological Life Support System Analysis and Modeling  
[SAE PAPER 921241] p 298 A93-41413
- Catalytic oxidation for treatment of ECLSS and PMMS waste streams --- Process Material Management Systems  
[SAE PAPER 921274] p 301 A93-41443
- Consumables and wastes estimations for the First Lunar Outpost  
[SAE PAPER 921287] p 302 A93-41453
- Test of the Shuttle Extended Duration Orbiter (EDO) Waste Collection Subsystem (WCS)  
[SAE PAPER 921346] p 305 A93-41505
- Technology development for lunar base waste recycling p 67 N93-13999
- Plasma reactor waste management systems  
p 68 N93-14000
- Distribution of human waste samples in relation to sizing waste processing in space  
p 68 N93-14001
- Annual report  
[NASA-CR-191389] p 105 N93-16840
- Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502
- WASTE TREATMENT**
- Life support research and development for the Department of Energy Space Exploration Initiative  
p 137 A93-25309
- Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management  
[SAE PAPER 921119] p 290 A93-41311
- An assessment of waste processing/resource recovery technologies for lunar/Mars life applications  
[SAE PAPER 921271] p 300 A93-41441
- Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems  
[SAE PAPER 921272] p 301 A93-41442
- Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate  
[SAE PAPER 921313] p 303 A93-41475
- Plasma reactor waste management systems  
p 68 N93-14000
- Annual report  
[NASA-CR-191389] p 105 N93-16840



- Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502
- Development of a pyrolysis waste recovery model with designs, test plans, and applications for space-based habitats p 267 N93-26076
- Environmental control and life support system p 311 N93-27718
- Technologies for ECLSS evolution p 311 N93-27720
- JSC ECLSS R/T program overview p 312 N93-27725

**WASTE UTILIZATION**

- Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309
- Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost p 346 A93-42124
- Regenerative life support technology challenges for the Space Exploration Initiative p 346 A93-42128
- Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- Plasma reactor waste management systems p 68 N93-14000

**WASTE WATER**

- An update on the readiness of vapor compression distillation for spacecraft wastewater processing [SAE PAPER 921114] p 290 A93-41307
- Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process [SAE PAPER 921275] p 301 A93-41444
- Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design [SAE PAPER 921277] p 301 A93-41446
- Gray water recycling with a unique vapor compression distillation (VCD) design [SAE PAPER 921318] p 304 A93-41480
- Recovering potable water from wastewater in space platforms by lyophilization [SAE PAPER 921323] p 304 A93-41485
- High-recovery low-pressure reverse osmosis [SAE PAPER 921353] p 306 A93-41512
- Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521
- Extraction of potable water from urine for space applications p 345 A93-42121
- A systems approach to water recycling research p 347 A93-42149
- Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 N93-12966
- Ultraviolet disinfection technology assessment [PB92-222868] p 64 N93-12983
- Variable-Volume Flushing (V-VF) device for water conservation in toilets p 195 N93-22167
- Environmental control and life support systems p 314 N93-27858
- Utilization of high energy electron beam in the treatment of drinking and waste water [DE92-642335] p 372 N93-32406

**WATER**

- A matrix-based porous tube water and nutrient delivery system [SAE PAPER 921390] p 309 A93-41548
- Submarine Advanced Integrated Life Support system (SAILS) program [AD-A253564] p 32 N93-11812
- Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- Technology development for lunar base water recycling p 67 N93-13999
- Conceptual design of a lunar base thermal control system p 68 N93-14003
- Europa: Prospects for an ocean and exobiological implications p 113 N93-18552

**WATER BALANCE**

- Does drinking protect against mountain sickness? p 382 A93-49565

**WATER CONSUMPTION**

- Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 N93-29216

**WATER IMMERSION**

- A second postcooling afterdrop - More evidence for a convective mechanism p 44 A93-14969
- Electromyographic investigations of tremor in aquanauts in simulated immersions p 90 A93-18292
- Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898
- Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206
- Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans p 381 A93-49293

- Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328

- Central cardiovascular pressures during graded water immersion in humans p 402 A93-55457

**WATER LOSS**

- Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin [AD-A258185] p 120 N93-17900

**WATER MANAGEMENT**

- Space Station Water Processor - Current flight design [SAE PAPER 921112] p 289 A93-41306
- Simplified analysis of water distribution for Space Station Freedom [SAE PAPER 921230] p 296 A93-41404
- The application of filtration technology within the Water Processor on board Space Station Freedom [SAE PAPER 921270] p 300 A93-41440
- Effects of air bubble contamination in recirculating water loop [SAE PAPER 921282] p 302 A93-41450
- An on-line water quality monitor for Space Station Freedom p 364 A93-46801
- Variable-Volume Flushing (V-VF) device for water conservation in toilets p 195 N93-22167
- Technologies for ECLSS evolution p 311 N93-27720
- Alternative processes for water reclamation and solid waste processing in a physical/chemical bioregenerative life support system p 311 N93-27721

**WATER POLLUTION**

- Space life support technology applications to terrestrial environmental problems p 265 N93-25617
- Development of novel models for describing multiple toxicity effects [AD-A264439] p 336 N93-30422

**WATER QUALITY**

- Microbiology operations and facilities aboard restructured Space Station Freedom [SAE PAPER 921213] p 296 A93-41389
- Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight [SAE PAPER 921232] p 297 A93-41406
- Process Control Water Quality Monitor for Space Station Freedom - Development update [SAE PAPER 921264] p 299 A93-41434
- Continuous monitoring of effluent iodine levels of Space Station water using solid state technology [SAE PAPER 921265] p 299 A93-41435
- The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality [SAE PAPER 921266] p 300 A93-41436
- Measurement of free and dissolved gas content of water samples on Space Station Freedom [SAE PAPER 921267] p 300 A93-41437
- Contaminant distribution and accumulation in water recycle systems [SAE PAPER 921360] p 307 A93-41519
- Inactivation of a model coliphage virus in water by iodine [SAE PAPER 921361] p 274 A93-41520
- A systems approach to water recycling research p 347 A93-42149
- An on-line water quality monitor for Space Station Freedom p 364 A93-46801
- Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 N93-12966
- Technology development for lunar base water recycling p 67 N93-13999
- Space life support engineering program [NASA-CR-192188] p 141 N93-19039

**WATER RECLAMATION**

- Bioregenerative life support as self-sustaining ecosystem in space p 231 A93-32073
- Space Station Water Processor - Current flight design [SAE PAPER 921112] p 289 A93-41306
- An update on the readiness of vapor compression distillation for spacecraft wastewater processing [SAE PAPER 921114] p 290 A93-41307
- Phase III Integrated Water Recovery Testing at MSFC - Closed hygiene and potable loop test results and lesson learned [SAE PAPER 921117] p 290 A93-41309
- Design of a Shuttle air and water prefilter for reduced gravity operation [SAE PAPER 921161] p 294 A93-41343
- A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization [SAE PAPER 921210] p 295 A93-41386
- Aquatic biofilms and their responses to disinfection and invading species [SAE PAPER 921211] p 296 A93-41387

- Simplified analysis of water distribution for Space Station Freedom [SAE PAPER 921230] p 296 A93-41404

- OCAM - A CELSS modeling tool: Description and results --- Object-oriented Controlled Ecological Life Support System Analysis and Modeling [SAE PAPER 921241] p 298 A93-41413

- Process Control Water Quality Monitor for Space Station Freedom - Development update [SAE PAPER 921264] p 299 A93-41434

- The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality [SAE PAPER 921266] p 300 A93-41436

- The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test [SAE PAPER 921269] p 300 A93-41439

- Catalytic oxidation for treatment of ECLSS and PMMS waste streams --- Process Material Management Systems [SAE PAPER 921274] p 301 A93-41443

- Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process [SAE PAPER 921275] p 301 A93-41444

- A hybrid regenerative water recovery system for lunar/Mars life support applications [SAE PAPER 921276] p 301 A93-41445

- Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design [SAE PAPER 921277] p 301 A93-41446

- Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472

- Biodeterioration of materials in water reclamation systems [SAE PAPER 921311] p 303 A93-41473

- Use of sorption technology for treatment of humidity condensate for potable water [SAE PAPER 921312] p 303 A93-41474

- Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate [SAE PAPER 921313] p 303 A93-41475

- Regenerable Microbial Check Valve - Life cycle tests results [SAE PAPER 921316] p 303 A93-41478

- Gray water recycling with a unique vapor compression distillation (VCD) design [SAE PAPER 921318] p 304 A93-41480

- Membrane technology for zero gravity life support systems [SAE PAPER 921320] p 304 A93-41482

- A novel membrane device for the removal of water vapor and water droplets from air [SAE PAPER 921322] p 304 A93-41484

- Recovering potable water from wastewater in space platforms by lyophilization [SAE PAPER 921323] p 304 A93-41485

- Water reclamation technology development for future long range missions [SAE PAPER 921351] p 306 A93-41510

- Modeling of membrane processes for air revitalization and water recovery [SAE PAPER 921352] p 306 A93-41511

- High-recovery low-pressure reverse osmosis [SAE PAPER 921353] p 306 A93-41512

- Contaminant distribution and accumulation in water recycle systems [SAE PAPER 921360] p 307 A93-41519

- Inactivation of a model coliphage virus in water by iodine [SAE PAPER 921361] p 274 A93-41520

- Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521

- Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553

- Extraction of potable water from urine for space applications p 345 A93-42121

- Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost p 346 A93-42124

- Regenerative life support technology challenges for the Space Exploration Initiative p 346 A93-42128

- A systems approach to water recycling research p 347 A93-42149

- ECLSS medical support activities [NASA-CR-184429] p 23 N93-12427

- Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 N93-12966

- Space life support engineering program [NASA-CR-192188] p 141 N93-19039

## SUBJECT INDEX

- Zero-G life support for Space Station Freedom p 233 N93-22640
- Alternative processes for water reclamation and solid waste processing in a physical/chemical bioregenerative life support system p 311 N93-27721
- Marshall Space Flight Center ECLSS technology activities p 312 N93-27724
- JSC ECLSS R/T program overview p 312 N93-27725
- Environmental control and life support systems p 314 N93-27858
- Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols p 359 N93-32354
- [NASA-CR-192570] p 359 N93-32354
- Microbiological and corrosion analysis of three urine pretreatment regimes with titanium 6A1-4V p 372 N93-32356
- [NASA-CR-192575] p 372 N93-32356
- Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems p 359 N93-32365
- [NASA-CR-192571] p 359 N93-32365
- WATER TEMPERATURE**
- Effect of task complexity on mental performance during immersion hypothermia p 211 A93-30279
- Life in hot springs and hydrothermal vents p 243 A93-36559
- WATER TREATMENT**
- Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight p 297 A93-41406
- [SAE PAPER 921232] p 297 A93-41406
- Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process p 297 A93-41408
- [SAE PAPER 921234] p 297 A93-41408
- Process Control Water Quality Monitor for Space Station Freedom - Development update p 299 A93-41434
- [SAE PAPER 921264] p 299 A93-41434
- The application of filtration technology within the Water Processor on board Space Station Freedom p 300 A93-41440
- [SAE PAPER 921270] p 300 A93-41440
- Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems p 301 A93-41442
- [SAE PAPER 921272] p 301 A93-41442
- Catalytic oxidation for treatment of ECLSS and PMMS waste streams --- Process Material Management Systems p 301 A93-41443
- [SAE PAPER 921274] p 301 A93-41443
- A hybrid regenerative water recovery system for lunar/Mars life support applications p 301 A93-41445
- [SAE PAPER 921276] p 301 A93-41445
- Effects of air bubble contamination in recirculating water loop p 302 A93-41450
- [SAE PAPER 921282] p 302 A93-41450
- Biofilm formation and control in a simulated spacecraft water system - Three year results p 303 A93-41472
- [SAE PAPER 921310] p 303 A93-41472
- Use of sorption technology for treatment of humidity condensate for potable water p 303 A93-41474
- [SAE PAPER 921312] p 303 A93-41474
- Experimental and theoretical study on membrane distillation using thermopervaporation p 309 A93-41554
- [SAE PAPER 921397] p 309 A93-41554
- ECLSS medical support activities p 23 N93-12427
- [NASA-CR-184429] p 23 N93-12427
- Ultraviolet disinfection technology assessment p 64 N93-12983
- [PB92-222868] p 64 N93-12983
- Regenerable biocide delivery unit p 112 N93-18351
- [NASA-CASE-MSC-21763-1-SB] p 112 N93-18351
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers p 149 N93-20065
- [NASA-CR-177602] p 149 N93-20065
- Study on environment control and life support technology p 149 N93-20413
- Utilization of high energy electron beam in the treatment of drinking and waste water p 372 N93-32406
- [DE92-642335] p 372 N93-32406
- WATER VAPOR**
- Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing p 303 A93-41464
- [SAE PAPER 921299] p 303 A93-41464
- Water reclamation technology development for future long range missions p 306 A93-41510
- [SAE PAPER 921351] p 306 A93-41510
- Experimental and theoretical study on membrane distillation using thermopervaporation p 309 A93-41554
- [SAE PAPER 921397] p 309 A93-41554
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers p 149 N93-20065
- [NASA-CR-177602] p 149 N93-20065
- WEAPON SYSTEMS**
- Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies p 317 N93-28850
- [AGARD-CP-520] p 317 N93-28850

- Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853
- Virtual interface applications for airborne weapons systems p 318 N93-28858
- WEAPONS DELIVERY**
- Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853
- WEATHER**
- Flight director information and pilot performance in instrument approaches p 131 N93-17857
- [AD-A258186] p 131 N93-17857
- WEIGHT (MASS)**
- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets p 13 N93-10709
- [AD-A252427] p 13 N93-10709
- WEIGHTLESSNESS**
- Contractile properties of the calf triceps muscle in humans exposed to simulated weightlessness p 45 A93-15168
- Adaptation of skeletal muscles and physical work capacity in a weightless environment p 38 A93-15527
- Human vestibular function and weightlessness p 84 A93-17531
- Intraocular pressure in microgravity p 85 A93-17539
- Human autonomic responses to actual and simulated weightlessness p 85 A93-17540
- Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547
- Cardiovascular adaptation to spaceflight p 86 A93-17550
- Hypokinesia and weightlessness: Clinical and physiologic aspects --- Book p 87 A93-17897
- [ISBN 0-8236-2415-3] p 87 A93-17897
- Cardiovascular physiology in space flight p 93 A93-20654
- Can the adult skeleton recover lost bone? p 93 A93-20656
- The mechanical control system of bone in weightless spaceflight and in aging p 94 A93-20657
- Formation of the hypokinetic syndrome in the digestive system under conditions of weightlessness p 119 A93-25600
- Influence of posture and prolonged head-down tilt on cardiovascular reflexes p 161 A93-28677
- Influence of ten-day head-down bedrest on human carotid baroreceptor-cardiac reflex function p 161 A93-28678
- Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679
- Effects of head-down tilt for 10 days on the compliance of the leg p 162 A93-28680
- Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681
- Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682
- Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684
- The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686
- Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687
- Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688
- Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689
- Variable lymphocyte responses in rats after space flight p 154 A93-28704
- Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706
- Skeletal muscle responses to unloading with special reference to man p 166 A93-28718
- Cardiovascular physiology - Effects of microgravity p 166 A93-28719
- Sperm motility under conditions of weightlessness p 156 A93-28730
- Management of trauma and emergency surgery in space p 167 A93-28734
- Neurology of microgravity and space travel p 168 A93-28735
- Health in space - And on Earth p 156 A93-28738
- The effects of prolonged weightlessness and reduced gravity environments on human survival p 214 A93-30773
- A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite p 240 A93-35215

## WEIGHTLESSNESS SIMULATION

- The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219
- The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242
- Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703
- Effects of long-term weightlessness on roll circula-rection p 279 A93-39725
- Membrane technology for zero gravity life support systems p 304 A93-41482
- [SAE PAPER 921320] p 304 A93-41482
- Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561
- Spatial orientation in weightless environments p 388 A93-49563
- Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568
- Functional adaptation of different rat skeletal muscles to weightlessness p 377 A93-49575
- Adaptation to the simulated stimulus rearrangement of weightlessness, p 403 A93-55942
- An overview of gravitational physiology p 35 N93-12319
- [NASA-TM-102849] p 35 N93-12319
- Establishing laboratory standards for biological flight experiments p 40 N93-12901
- [NASA-CR-184402] p 40 N93-12901
- Bone loss and human adaptation to lunar gravity p 51 N93-14002
- Passive zero-gravity leg restraint p 70 N93-14713
- [NASA-CASE-ARC-11882-1-CU] p 70 N93-14713
- Exercise during long term exposure to space: Value of exercise during space exploration p 82 N93-16807
- Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females p 128 N93-20318
- [NASA-TP-3298] p 128 N93-20318
- Biomedical Monitoring and Countermeasures Facility p 205 N93-22624
- Zero-G life support for Space Station Freedom p 233 N93-22640
- Two techniques for measuring locomotion impact forces during zero G p 217 N93-23410
- [NASA-TP-3305] p 217 N93-23410
- Physiological experiments within the project AustroMir p 219 N93-24354
- Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363
- Japanese treefrog experiment onboard the Space Station Mir p 210 N93-24402
- JPRS report: Science and technology, Central Eurasia: Life sciences p 253 N93-25407
- [JPRS-ULS-92-022] p 253 N93-25407
- MAC to VAX connectivity: Heartrate spectral analysis system p 254 N93-25594
- Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 N93-29502
- WEIGHTLESSNESS SIMULATION**
- Protection of Acanthopanax senticosus against suspension-induced bone loss in rats, p 2 A93-13528
- Preliminary observation of influences of three forms of simulated weightlessness on hemorheological characteristics in rabbit p 3 A93-13538
- Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972
- Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt p 37 A93-14974
- Changes of REG during 4h head-down bed-rest p 46 A93-16075
- Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161
- Zero-gravity underwater simulations for the Columbus programme - Outcome of the first campaigns p 62 A93-17075
- Human autonomic responses to actual and simulated weightlessness p 85 A93-17540
- Method of selection of astronauts cardiovascular regulative function under simulated weightlessness p 91 A93-19995
- A physiological signal acquisition and processing system for bed-rest laboratory p 103 A93-19998
- Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity p 78 A93-20036
- Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039
- Increased orthostatic blood pressure variability after prolonged head-down tilt p 161 A93-28676

- Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683  
Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720  
Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity p 168 A93-28736  
Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765  
Effect of simulated weightlessness on microvessel permeability of various organs in rabbits p 199 A93-30438  
Vestibulo-oculomotor responses under conditions of immersion hypokinesia p 251 A93-35256  
Simulating reduced gravity - A review of biomechanical issues pertaining to human locomotion p 289 A93-41175  
Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178  
Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression p 327 A93-44184  
Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness p 327 A93-44842  
The simulation of microgravity conditions on the ground --- and biological effects of weightlessness p 375 A93-49207  
Some qualitative and quantitative aspects of the fast-rotating clinostat as a research tool --- for effects of weightlessness on biological objects p 375 A93-49209  
The fast rotating clinostat - A history of its use in gravitational biology and a comparison of ground-based and flight experiment results p 376 A93-49212  
Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity p 377 A93-49294  
A simple hindlimb suspension apparatus p 398 A93-55168  
Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle p 399 A93-55458

**WETTING**

- Moistening of the substrate in microgravity p 135 A93-21906

**WHEAT**

- Crop growth and associated life support for a lunar farm p 67 A93-13994  
Investigation of wheat coleoptile response to phototropic stimulations [NASA-CR-192157] p 114 A93-18608  
Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 A93-29216

**WHEELCHAIRS**

- Wheels for wheelchairs and the like [NASA-CASE-MFS-28632-1] p 106 A93-17042  
Platform stair lift [NASA-CASE-MFS-28772-1] p 353 A93-29845

**WHEELS**

- Wheels for wheelchairs and the like [NASA-CASE-MFS-28632-1] p 106 A93-17042  
Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 A93-19708

**WHITE NOISE**

- Classification of complex sounds [AD-A258405] p 122 A93-18223

**WIDE ANGLE LENSES**

- Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 A93-25736

**WIND (METEOROLOGY)**

- Windblast tolerance of human thorax and abdomen p 91 A93-19992

**WIND PROFILES**

- Transfer effects of scene content and crosswind in landing instruction p 62 A93-15665

**WINTER**

- Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 A93-12145

**WIRELESS COMMUNICATION**

- The locator system for wandering individuals [NASA-TM-104754] p 31 A93-11649

**WIRING**

- Potential human health effects associated with power frequency electric and magnetic fields [PB93-132678] p 221 A93-24590

**WORD PROCESSING**

- The role of spatial attention in visual word processing p 339 A93-44922

**WORDS (LANGUAGE)**

- Cognition and the brain [AD-A255483] p 59 A93-14788  
Facilitation and interference in identification of pictures and words [AD-A261484] p 260 A93-26356

**WORK CAPACITY**

- The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172  
Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173  
Adaptation of skeletal muscles and physical work capacity in a weightless environment p 38 A93-15527  
Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028  
Investigation of individual and typological features of an operator's nervous system under different work regimes p 339 A93-43024  
Pre-adaptation to shiftwork in space p 386 A93-52403  
The problem of the pilot's professional reliability p 410 A93-55334

**WORK-REST CYCLE**

- Documentation of activity and rest of a U.S. National Guard attack helicopter battalion p 9 A93-10338  
Sleep as a restorative process under extreme conditions p 89 A93-18291  
Pre-adaptation to shiftwork in space p 386 A93-52403  
Bright light delivery system [NASA-CASE-MFS-28723-1] p 96 A93-17058  
The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm [AD-A258146] p 122 A93-18292  
Simulated sustained flight operations and performance. Part 1: Effects of fatigue [AD-A261012] p 266 A93-25859  
Engineman stress and fatigue: Pilot tests [PB93-175008] p 351 A93-29675

**WORKLOADS (PSYCHOPHYSIOLOGY)**

- Relationship between ERP and workload in manual control p 30 A93-13721  
Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft p 45 A93-15175  
Psychophysiological stress research - Methodology and results of an investigation involving air traffic controllers [ISBN-3-258-04585-2] p 97 A93-17971  
Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation --- Task Load Index p 175 A93-27139  
The effect of type of task, degree of integration, and modality on the performance of concurrent tasks p 175 A93-27140  
CREWCUT - A new tool for predicting human performance in conceptual systems p 178 A93-27179  
CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180  
Testing a subjective metric of situation awareness p 178 A93-27183  
Cardiorespiratory measures of workload during continuous manual performance p 160 A93-27192  
Some biochemical and functional characteristics of body state during multihour operator activity under extreme conditions p 161 A93-27686  
Assessing pilot workload - Why measure heart rate, HRV and respiration? p 168 A93-28741  
Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762  
Investigation of hemodynamics and sympathetic/adrenal system activity in air traffic controllers during their work p 247 A93-35209  
Adaptation of young pilots to new conditions of their work (Social-psychological aspects) p 256 A93-35220  
Occupational health problems in aviation medicine p 252 A93-36743  
Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel p 257 A93-36744  
Flight deck automation and pilot workload [SAE PAPER 921132] p 291 A93-41320  
Failure mode workload theory and planning p 349 A93-42848  
A comparison of two scoring procedures with the NASA task load index in a simulated flight task p 349 A93-42849  
Respiration curves as an index of pilot workload p 332 A93-45320  
A method for predicting the work load of a flight engineer engaged in counteracting failures of functional systems of a transport aircraft p 364 A93-45688  
Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406

- Recommendations for mental workload measurement in a test and evaluation environment p 394 A93-52504

- Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine p 402 A93-55332  
The problem of the pilot's professional reliability p 410 A93-55334

- Operator workload predictions for the revised AH-64A workload prediction model, volume 1 [AD-A254198] p 30 A93-10261  
Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1 [AD-A254138] p 25 A93-10662  
KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 A93-10713  
NASA Space Human Factors Program [NASA-TM-108005] p 31 A93-10890  
From pilot's associate to satellite controller's associate p 32 A93-11922  
Human performance in complex task environments: A basis for the application of adaptive automation [AD-A255067] p 35 A93-12486  
Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendices A through H [AD-A254939] p 63 A93-12545  
Cognitive and affective components of mental workload: Understanding the effects of each on human decision making behavior p 99 A93-16783  
Automatic information processing and high performance skills [AD-A258473] p 132 A93-18273  
The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm [AD-A258146] p 122 A93-18292  
Modeling the dynamics of mental workload and human performance in complex systems p 135 A93-19956  
Physiological indices of mental workload [AD-A261692] p 260 A93-26391  
Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 A93-28853  
Human capabilities and limitations in situation awareness p 319 A93-28863  
Engineman stress and fatigue: Pilot tests [PB93-175008] p 351 A93-29675  
Application and validation of workload assessment techniques [AD-A264575] p 366 A93-32012
- WORKSTATIONS**  
Training for avionics evaluation [AIAA PAPER 92-4068] p 24 A93-11254  
A physician's workstation designed for NASA and earth-based applications p 189 A93-28695  
Visual search in virtual environments p 233 A93-33450  
The General Purpose Work Station, a spacious microgravity workbench [SAE PAPER 921394] p 309 A93-41552  
Human factors applications in control systems design for ground testing of turbine engines p 409 A93-54410  
Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis p 33 A93-11941  
Passive zero-gravity leg restraint [NASA-CASE-ARC-11882-1-CU] p 70 A93-14713  
Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 A93-15825  
Treatment of human-computer interface in a decision support system [DE93-002281] p 237 A93-24502
- WORMS**  
Caenorhabditis elegans - A model system for space biology studies p 80 A93-20665
- WOUND HEALING**  
Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy [AD-A262483] p 285 A93-28759
- WRIST**  
Prevention of cumulative trauma disorders [PB93-188332] p 338 A93-31138

X

**X RAY APPARATUS**

- X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 A93-18295

**X RAY IMAGERY**

- Digital mammography, cancer screening: Factors important for image compression p 221 A93-24551

## **SUBJECT INDEX**

## **ZOOPLANKTON**

### **X RAY IRRADIATION**

Roentgenophosphene as an indicator of the radiation  
excitability of the central nervous system

p 325 A93-43078

### **X RAY SOURCES**

X Ray System, Lightweight Medical (XRSLM)

[AD-A258159] p 123 N93-18295

## **Y**

### **YAW**

Influence of gravito-inertial force level on vestibular and  
visual velocity storage in yaw and pitch

p 165 A93-28701

### **YEAST**

A microfermentation test for the rapid identification of  
yeasts p 156 A93-28733

Relative resistance of biofilms and planktonic cells of  
common molds and yeasts to antimicrobials

[SAE PAPER 921212] p 273 A93-41388

Biotechnical production and use of pyruvic acid with  
special reference to coenzyme regeneration

[VTT-PUBS-77] p 209 N93-23369

### **YIELD**

Modification of yield and chlorophyll content in leaf  
lettuce by HPS radiation and nitrogen treatments

p 328 A93-44880

## **Z**

### **ZEOLITES**

Moistening of the substrate in microgravity

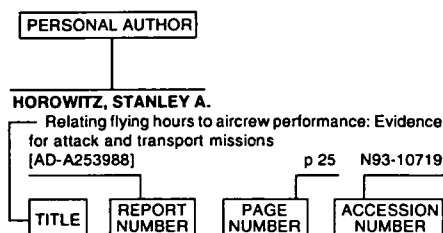
p 135 A93-21906

### **ZOOPLANKTON**

How do zooplankton feed? A critical microgravity  
experiment p 158 N93-21097

Gravity as a factor in the orientation and vertical  
migration of marine zooplankton p 158 N93-21098

## Typical Personal Author Index Listing



Listings in this index are arranged alphabetically by personal author. The title of the document is used to provide a brief description of the subject matter. The report number helps to indicate the type of document (e.g., NASA report, translation, NASA contractor report). The page and accession numbers are located beneath and to the right of the title. Under any one author's name the accession numbers are arranged in sequence.

## A

### AALTO, HEIKKI

Postural stabilization on a moving platform oscillating at high frequencies p 252 A93-35497

### AARON, ELIZABETH A.

Effect of chronic hypoxia on hypoxic ventilatory response in awake rats p 323 A93-42187

### AASLID, R.

Cerebral autoregulation in microgravity p 173 N93-21112

### ABBOTT, KATHY H.

Human-centered automation and AI - Ideas, insights, and issues from the Intelligent Cockpit Aids research effort p 407 A93-52764

### ABBOTT, TERENCE S.

Evaluation of conformational and body-axis attitude information for spatial awareness p 229 A93-30070

### ABERNETHY, M. K.

Flight physiology - Clinical considerations p 164 A93-28690

### ABOOD, DORIS A.

Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption [AD-A250648] p 23 N93-11893

### ABOUSAH, ISABELLE

Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 A93-14973

### ABOWD, GREGORY D.

Formal aspects of human-computer interaction p 66 N93-13909

### ABRAMOV, M. M.

Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263

### ACHESON, KEVIN

Protein absorption and energy digestibility at high altitude p 115 A93-21683

### ACKERMAN, P. L.

Predicting individual differences in complex skill acquisition - Dynamics of ability determinants p 181 A93-28731

### ACKLES, KENNETH N.

Bibliography of the Biosciences Division: 1986 to present [DCIEM-92-20] p 209 N93-23343

### ACWORTH, IAN N.

Dopamine release in rat striatum - Physiological coupling to tyrosine supply p 152 A93-27050  
Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens p 201 A93-32118  
Tyrosine - Effects on catecholamine release p 204 A93-33038

### ADAM, SUSAN C.

Operational space human factors - Methodology for a DSO [SAE PAPER 921156] p 293 A93-41339

### ADAMIAN, TS. I.

The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863

### ADAMS, ALAN

Environmental control and life support system p 311 N93-27718

### ADAMS, GREGORY R.

Magnetic resonance imaging and electromyography as indexes of muscle function p 44 A93-14975  
Mapping of electrical muscle stimulation using MRI p 279 A93-40549

### ADAMS, JOHN C.

Emergence of telerobotic control enhancement from research in machine autonomy p 183 A93-27028

### ADAMS, RICHARD J.

How expert pilots think: Cognitive processes in expert decision making [DOT/FAA/RD-93/9] p 288 N93-27103

### ADELMAN, LEONARD

Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503

### ADNAN, SARMA D.

Testbed for remote telepresence research p 193 A93-29135

### ADVANI, S. K.

What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment [AIAA PAPER 93-3561] p 406 A93-52661

### AGADZHANIAN, N. A.

Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165

### AGADZHANIAN, S. R.

The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863

### AGAPOV, I. V.

Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249

### AGELIDIS, A.

Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317

### AGGARWAL, HANS

Comet impacts and chemical evolution on the bombarded earth p 109 A93-17980

### AGNEW, JAMES W.

Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronectin p 47 A93-16157

### AGOSTI, STEVEN J.

Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332

### AGRAWAL, SUNIL K.

Motion planning of a dual-arm free-floating manipulator with inertially fixed base [AIAA PAPER 93-3864] p 393 A93-51450

### AGRAWALA, ASHOK

Architecture of autonomous systems [NASA-CR-192974] p 266 N93-26047

### AGUADO, M. T.

Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems p 20 N93-11310

### AHEARN, D. G.

Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388

### AHMED, NAGIN

Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy p 211 A93-30278

### AHRENS, THOMAS J.

The late or organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite p 110 A93-17984

### AINE, C. J.

Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566

### AIRAPETIAN, SINERIK N.

Ion transport across membranes under exposure of the organism to ionizing radiation [ISBN 5-12-001801-4] p 243 A93-35679

### AIRENTI, GABRIELLA

Ontology of mind, subjective ontology, and the example of temporal expressions [REPT-92-018] p 26 N93-11212

### AIUTI, FERNANDO

Silent HIV infection p 16 N93-11293

### AIZIKOV, G. S.

A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite p 240 A93-35215  
Turning-over reaction during free fall in labyrinthectomized rats after a flight on the Cosmos 936 biosatellite p 241 A93-35246

### AJJARAPU, SUNDARA R. M.

Use of sorption technology for treatment of humidity condensate for potable water [SAE PAPER 921312] p 303 A93-41474

### AKERS, CAROLYN P.

Minitron II system for precise control of the plant growth environment p 357 A93-46470  
The Minitron system for growth of small plants under controlled environment conditions p 358 A93-46471

### AKERS, S. W.

Minitron II system for precise control of the plant growth environment p 357 A93-46470

### AKERS, STUART W.

The Minitron system for growth of small plants under controlled environment conditions p 358 A93-46471

### AKESON, MICHAEL

Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis p 7 A93-10329

### AKIMOV, S. N.

Prediclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots p 91 A93-18416

### AKIN, DAVID L.

Neutral buoyancy simulation of space telerobotics operations p 185 A93-27038

### AKOEV, G. N.

The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system p 2 A93-12861

### AKOPIAN, N. S.

The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860

### AKSE, JAMES R.

Catalytic oxidation for treatment of ECLSS and PMMS waste streams [SAE PAPER 921274] p 301 A93-41443

### ALAMELDIN, TAREK

Operator/system communication - An optimizing decision tool p 101 A93-19104

### ALBERS, H. E.

Neurochemical control of circadian rhythms [AD-A255054] p 50 N93-13116

### ALBERTS, THOMAS E.

Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222

**ALBRECHT-BUEHLER, GUENTER**

The simulation of microgravity conditions on the ground p 375 A93-49207

**ALBRECHT, R.**

Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363

**ALCON, J. L. GARCIA**

An epidemiological study in SAF's pilots ejections p 143 N93-19699

**ALCON, JOSE L. GARCIA**

Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots p 369 N93-32258

**ALDASHEV, ALK'S A.**

Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude p 326 A93-44181

**ALEKIN, A. O.**

Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419

**ALEKSANDROVA, N. P.**

An analysis of the respiratory muscle fatigue under resistive loading when breathing gas mixtures containing different amounts of oxygen p 76 A93-18299

**ALEKSEVA, G. S.**

The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242

**ALESINA, M. IU.**

The state of the endocrine system of rats of different age under conditions of immobilization stress and biomass administration p 242 A93-35671

**ALEXANDER, HAROLD L.**

Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles p 135 A93-22916

Vision navigator for free-flying robots p 183 A93-27025

Robot free-flyers in space extravehicular activity p 193 A93-29141

Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406

**ALEXANDER, JOANNA R.**

Visual data interpretation; Proceedings of the Meeting, San Jose, CA, Feb. 10-11, 1992 [SPIE-1668] p 391 A93-49451

**ALEXANDRE, C.**

Microgravity and bone adaptation at the tissue level p 170 A93-28761

**ALFEROVA, I. V.**

Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238

**ALLEBACH, JAN P.**

Human vision, visual processing, and digital display II; Proceedings of the Meeting, San Jose, CA, Feb. 27-Mar. 1, 1991 [SPIE-1453] p 137 A93-25363

**ALLEN, EARL R.**

Active synthetic soil [NASA-CASE-MSC-21954-1-NP] p 114 N93-19054

**ALLEN, KATHERINE**

Gravitational Biology Facility on Space Station: Meeting the needs of space biology p 206 N93-22625

**ALLTON, J. H.**

The lunar community church: Contributions to lunar living and to evolution of ethical and spiritual thinking p 57 N93-14020

**ALNAES, E.**

Operational use of contact lenses by military aircrew [AGARD-AG-334] p 95 N93-15824

**ALONSO, C.**

Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 N93-32253

**ALPATOV, A. M.**

Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706

**ALPERT, NATHANIEL M.**

Cognition in the brain: Investigations using positron emission tomography [AD-A254280] p 14 N93-10765

**ALSTON, JIM A.**

Continued results of the seeds in space experiment p 330 N93-29703

**ALTENBERG, BARBARA H.**

Oxygen production on the Lunar materials processing frontier p 315 N93-27967

**ALTIERI, P. A.**

Aging, expertise, and narrative processing p 180 A93-28724

**AMALBERTI, R.**

Cognitive factors in the air events of the Air Force during the last decade p 134 N93-19682

**AMATO, IVAN**

In search of the human touch p 102 A93-19256

**AMBLARD, P.**

Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553

**AMIDON, GORDON L.**

Effects of gravity on gastric emptying, intestinal transit, and drug absorption p 85 A93-17543

**AMIT, DANIEL J.**

Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962

Constraints on learning in dynamic synapses [PREPRINT-890] p 100 N93-17026

Effective neurons and attractor neural networks in cortical environment [PREPRINT-829] p 82 N93-17214

**AMO, KARL**

Water reclamation technology development for future long range missions [SAE PAPER 921351] p 306 A93-41510

**AMOROSO, MICHAEL T.**

Hyperbaric treatment p 360 N93-31454

Daily exercise routines p 360 N93-31455

**AMREIN, BRUCE E.**

Improved head support stand adjustable by compound turnbuckle [AD-D015384] p 55 N93-15249

**ANAND, INDER S.**

Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125

**ANAND, SULEKHA**

Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 A93-51959

**ANASHKIN, O. D.**

Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238

**ANDARY, JAMES F.**

Characteristics and requirements of robotic manipulators for space operations p 182 A93-27003

Safety issues of manipulator systems under computer control p 192 A93-29121

**ANDERSEN, DALE**

Exobiology: The NASA program p 114 N93-18561

**ANDERSEN, GEORGE J.**

Active control versus passive observation in a simulated flight task p 179 A93-27196

The impact of visual noise on spatial orientation p 257 A93-36229

**ANDERSEN, H. T.**

Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243

Changes in food and energy intake in military aircrew p 368 N93-32246

Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 N93-32261

**ANDERSEN, T. A. E.**

The USO-concept applied to a biological model experiment p 210 N93-24379

Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382

**ANDERSON, G.**

Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037

An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137

**ANDERSON, GLEN**

Gloved operator performance study [AD-A256894] p 104 N93-16048

**ANDERSON, PATRICK L.**

Daily exercise routines p 360 N93-31455

**ANDES, ROBERT C., JR.**

Specification of adaptive aiding systems [AD-A263071] p 314 N93-27927

**ANDINO, AUREO F.**

Human factor considerations for the First Lunar Outpost [AIAA PAPER 93-1014] p 223 A93-30928

**ANDRE, ANTHONY D.**

S-R compatibility effects with orthogonal stimulus and response dimensions p 179 A93-27194

Compatibility and consistency in display-control systems - Implications for aircraft decision aid design p 230 A93-30454

**ANDRES, ROBERT O.**

Adaptation to transient postural perturbations [NASA-CR-190959] p 105 N93-16699

**ANDRIENKO, IU. I.**

Informative value of the rerespiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors p 248 A93-35222

Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244

**ANHOLT, ROBERT R.**

Primary events in olfactory reception [AD-A260562] p 255 N93-25944

**ANISIMOV, O. I.**

Ultrasonic location of gas bubbles in the vascular bed of a person working in a space suit p 262 A93-35239

**ANISIMOVA, I. V.**

The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216

**ANSARI, RAFAT R.**

A fiber optic probe for the detection of cataracts p 254 N93-25593

**ANSPAUGH, LYNN**

Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774

**ANTOL, PAUL J.**

Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167

**ANTON, D. J.**

Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663

Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664

**ANTONELLI, D.**

An operational evaluation process for long-duration mission habitats in space p 345 A93-42114

**ANTONENKO, L. V.**

Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208

**ANTONIO, CHUCK**

USAF/USN fixed wing night vision - The mission p 227 A93-30055

**ANTONIO, JOSEPH C.**

CATS EYES adjustment procedures [AD-A264069] p 353 N93-29924

**ANTONOVA, G. M.**

Estimation of the number of operators and their efficiency in flight vehicle control p 193 A93-29696

**ANTRAZI, SAMI S.**

Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598

**ANTUNANO, M. J.**

Thermal convergence fails to predict heat tolerance limits p 8 A93-10331

**ANTUNANO, MELCHOR J.**

Heat stress in protective clothing - Validation of a computer model and the Heat-Humidity Index (HHI) p 88 A93-18040

Bibliographic guide to publications in aerospace medicine and related topics p 252 A93-35500

Index of international publications in aerospace medicine [AD-A262908] p 284 N93-28306

**ANZALONE, G.**

In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automatized enzyme immunoassay method to dose specific IgE p 21 N93-11314

**APEL, G.**

27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696

**APPEL, R.**

Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728

**APPELT, DOUGLAS**

Interpretation as abduction [AD-A259608] p 225 N93-24227

**APSELOFF, G.**

Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703

**ARAGON, JORGE**

Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297



# PERSONAL AUTHOR INDEX

- ARAI, AKIRA**  
Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286
- ARATOW, M.**  
Direct measurement of capillary blood pressure in the human lip p 279 A93-40550  
Intramuscular pressure and electromyography as indexes of force during isokinetic exercise p 380 A93-49291
- ARATOW, MICHAEL**  
Transcapillary fluid responses to lower body negative pressure p 380 A93-49292
- ARBEILLE, P.**  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681  
Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689
- ARDITI, ARIES**  
Human visual performance model for crewstation design p 182 A93-26887  
Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323
- AREND, H.**  
The European astronauts training programme p 226 A93-24346
- AREND, LAWRENCE E., JR.**  
Perception of lightness and brightness in complex patterns [AD-A254093] p 25 N93-10658
- ARLINGHAUS, H. F.**  
Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 N93-26587
- ARMICHEV, A. V.**  
Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- ARMOGIDA, F.**  
A systems approach to the advanced aircraft man-machine interface p 146 N93-19776
- ARMSTRONG, J.**  
Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574
- ARMSTRONG, KAREM**  
Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806  
Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018
- ARMSTRONG, STEPHEN D.**  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265
- ARMSTRONG, STEPHEN H.**  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264
- ARNDT, CRAIG M.**  
Task allocation and automation in design and operation of man-machine systems p 348 A93-42842  
Failure mode workload theory and planning p 349 A93-42848
- ARNETT, J. L.**  
Effect of task complexity on mental performance during immersion hypothermia p 211 A93-30279
- ARNOLD, K.**  
Aimed arm movements under changed gravity p 193 N93-21113
- ARNOLD, KARIN E.**  
Accuracy of aimed arm movements in changed gravity p 56 A93-16159
- ARP, LARRY D.**  
Concrete lunar base investigation p 107 N93-17445
- ARTAMONOVA, N. P.**  
Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208
- ARTAUD, P.**  
Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 N93-19708
- ARTHUR, D. C.**  
Success rate analysis of Navy SERGRAD Flight Training p 56 A93-16152
- ASAKURA, MAKOTO**  
Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254  
Research of a free-flying telerobot. V - Handling a target with multi-arms p 411 A93-56255

- ASANO, K.**  
Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560
- ASHIDA, AKIRA**  
A trade study method for determining the design parameter of CELSS subsystems p 295 A93-41374  
[SAE PAPER 921198]  
Experimental and theoretical study on membrane distillation using thermopervaporation [SAE PAPER 921397] p 309 A93-41554
- ASKEW, GREGORY K.**  
Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia p 34 N93-12291  
[AD-A255120]  
Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress [AD-A258552] p 148 N93-19955
- ASSENHEIM, HARRY M.**  
Large-screen-projection, avionic, and helmet-mounted displays: Proceedings of the Meeting, San Jose, CA, Feb. 26-28, 1991 [SPIE-1456] p 181 A93-26881
- ASSMUS, BERNHARD**  
Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280
- ASUKATA, ICHIRO**  
Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306
- ATASSI, M. Z.**  
Measuring the metastatic potential of cancer cells p 244 N93-25566
- ATEN, LAURIE A.**  
A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization [SAE PAPER 921210] p 295 A93-41386
- ATKINSON, COLIN**  
Mission and Safety Critical (MASC): An EVACS simulation with nested transactions [NASA-CR-192295] p 149 N93-20314
- ATKOV, OLEG IU.**  
Hypokinesia and weightlessness: Clinical and physiologic aspects [ISBN 0-8236-2415-3] p 87 A93-17897
- ATOCHIN, D. N.**  
Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293  
The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294
- ATREYA, SUSHIL K.**  
Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 N93-18551
- ATWATER, J. E.**  
An on-line water quality monitor for Space Station Freedom p 364 A93-46801
- ATWATER, JAMES E.**  
Regenerable Microbial Check Valve - Life cycle tests results [SAE PAPER 921316] p 303 A93-41478  
Regenerable biocide delivery unit, volume 1 [NASA-CR-185701-VOL-1] p 274 N93-27122  
Regenerable biocide delivery unit, volume 2 [NASA-CR-185701-VOL-2] p 275 N93-27360
- ATWELL, W.**  
Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- ATWELL, WILLIAM**  
Radiological assessment for Space Station Freedom [NASA-TM-104758] p 128 N93-20303
- AUCOIN, PASCHAL J., JR.**  
Person-like intelligent systems architectures for robotic shared control and automated operations p 191 A93-29113
- AUGUSTINE, MARGRET**  
Life systems for a lunar base p 66 N93-13992
- AULDS, J. M.**  
Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065
- AUSONI, SIMONETTA**  
Myosin and troponin changes in rat soleus muscle after hindlimb suspension p 273 A93-41124
- AUTY, DAVID**  
Mission and Safety Critical (MASC): An EVACS simulation with nested transactions [NASA-CR-192295] p 149 N93-20314
- AVAKOV, V. I.**  
A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object p 364 A93-45685
- AVAKYAN, Y.**  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367

# BAGDIGIAN, ROBERT M.

- AYATA, HARUKI**  
Conceptual study of manned lunar surface site p 316 N93-28031
- AYLWARD, JUDY M.**  
Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 N93-20384
- AZARBAYEJANI, ALI J.**  
Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles p 135 A93-22916  
Vision navigator for free-flying robots p 183 A93-27025
- AZARENKO, V. V.**  
A comparative analysis of the bone marrow cell composition in rats following a long-duration continuous or interrupted exposure to a hypogeomagnetic field p 240 A93-35213
- AZHAEV, A. N.**  
The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172
- AZUETA, STEVEN**  
Human visual performance model for crewstation design p 182 A93-26887  
Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323
- ## B
- BABAEV, B.**  
Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- BABKOFF, HARVEY**  
Sleep inertia: Is there a worst time to wake up? [AD-A256602] p 52 N93-14240
- BACHL, N.**  
Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363
- BACK, L. H.**  
Wall shear stress estimates in coronary artery constrictions p 170 A93-28759
- BACKES, PAUL**  
Telerobot control mode performance assessment [AAS PAPER 92-053] p 392 A93-50593
- BACKES, PAUL G.**  
Ground-remote control for space station telerobotics with time delay [AAS PAPER 92-052] p 392 A93-50592
- BACKS, RICHARD W.**  
Cardiorespiratory measures of workload during continuous manual performance p 160 A93-27192
- BADA, JEFFREY L.**  
The origin of the polycyclic aromatic hydrocarbons in meteorites p 110 A93-17983  
Comment on 'Summary and implications of reported amino acid concentrations in the Murchison meteorite' by E. L. Shock and M. D. Schulte p 412 A93-53294
- BADDELEY, A.**  
The central executive component of working memory [AD-A258724] p 135 N93-20326
- BADHWAR, G. D.**  
Depth-dose equivalent relationship for cosmic rays at various solar minima p 391 A93-49564
- BADHWAR, GAUTAM D.**  
Katz model prediction of *Caenorhabditis elegans* mutagenesis on STS-42 [NASA-TM-4383] p 50 N93-13023  
Radiological assessment for Space Station Freedom [NASA-TM-104758] p 128 N93-20303
- BADLER, NORMAN**  
Human-like agents with posture planning ability p 192 A93-29118
- BADLER, NORMAN I.**  
Modeling clothed figures [AD-A257037] p 71 N93-15363
- BADR, M. S.**  
Determinants of poststimulus potentiation in humans during NREM sleep p 78 A93-20034
- BAERTSCH, PETER**  
Interactions between Hb, Mg, DPG, ATP, and CI determine the change in Hb-O2 affinity at high altitude p 279 A93-41117
- BAEVSKII, R. M.**  
Data bank establishment principles as applied to the problem of physiological norms in space medicine p 249 A93-35234
- BAGDIGIAN, ROBERT M.**  
Phase III Integrated Water Recovery Testing at MSFC - Closed hygiene and potable loop test results and lesson learned [SAE PAPER 921117] p 290 A93-41309

**BAGGERUD, C.**

The USO-concept applied to a biological model experiment p 210 N93-24379

**BAGGS, RAYMOND**

Potential health hazards from thermal degradation events - Particulate vs. gas phase effects [SAE PAPER 921388] p 282 A93-41546

**BAGIAN, JAMES P.**

First intramuscular administration in the U.S. space program p 84 A93-17534  
Cerebral blood flow - Comparison of ground-based and spaceflight data and correlation with space adaptation syndrome p 87 A93-17553  
Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 A93-30283  
Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122

**BAHRAMIAN, B.**

An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128

**BAI, JING**

Study of the relationship between therapeutic effects and control parameters of ECP using a simulation method p 11 A93-13716

**BAI, YANQIANG**

Effect of DL-DOPA, L-5-HTP and pentobarbital sodium on brain encephalofluorographs in rats p 2 A93-13530

**BAIN, J. B.**

Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing p 389 A93-49218  
Continuous vs. intermittent work with Canadian forces NBC clothing p 389 A93-49219

**BAINS, ELIZABETH M.**

Human-in-the-loop evaluation of RMS Active Damping Augmentation [AIAA PAPER 93-3875] p 393 A93-51460

**BAINUM, PETER M.**

Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517

**BAISCH, F.**

Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972  
Increased orthostatic blood pressure variability after prolonged head-down tilt p 161 A93-28676  
Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681  
Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682  
Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683  
Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684  
Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685  
The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686  
Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687  
Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688  
Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689  
Cardiovascular stress test with non-invasive techniques p 221 A93-24399

**BAKER-FULCO, CAROL J.**

Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge [AD-A264260] p 337 N93-30894

**BAKER, A.**

Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569

**BAKER, DANIEL R.**

Sudden loading and fatigue effects on the human spine [PB93-167526] p 286 N93-29199

**BAKLAVADZHIAN, O. G.**

The response of medullar respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860

**BALAKLEEVSKI, A. I.**

The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034

**BALARAM, J.**

Remote surface inspection system p 410 A93-55469

**BALDWIN, KENNETH M.**

Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs p 326 A93-44183  
Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression p 327 A93-44184

**BALDWIN, LAWRENCE C.**

Evaluation and estimation of handling qualities via statistical modeling of pilot response data [AD-A255324] p 69 N93-14548

**BALKIN, THOMAS**

Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042

**BALLARD, R. E.**

Intramuscular pressure and electromyography as indexes of force during isokinetic exercise p 380 A93-49291

**BALLAS, JAMES A.**

Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 N93-11784

**BALLIN, MARK G.**

Consumables and wastes estimations for the First Lunar Outpost [SAE PAPER 921287] p 302 A93-41453

**BALON, THOMAS W.**

Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity p 78 A93-20036

**BALSER, BURKHARD**

User areas in aircraft cockpit, using methods of rapid prototype development [MBB-FE-315-S-PUB-0493] p 196 N93-22389

**BAMBACH, GREGORY A.**

Heart and lung alterations in neonatal rats exposed to CO or high altitude p 77 A93-20027

**BANERJEE, AMIT**

Electrically modifiable nonvolatile SONOS synapses for electronic neural networks [AD-A258318] p 122 N93-18252

**BANKMAN, ISAAC N.**

Automated system for analyzing the activity of individual neurons p 173 N93-22163  
Automated system for early breast cancer detection in mammograms p 253 N93-25568

**BANKS, MARTIN S.**

The perception of heading during eye movements p 99 A93-20692

**BANKS, ROBERT D.**

The Canadian forces airsickness rehabilitation program, 1981-1991 p 89 A93-18042

**BANTA, GUY R.**

Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330

**BAPU, P. T.**

Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065

**BARBARINO, MANFRED**

Stress resistance as a diagnostic category in air traffic controller selection [DLR-FB-92-13] p 219 N93-24092

The position test: A computer generated process for acquisition of inductive logic thinking p 343 N93-31232

**BARBER, ELLEN T.**

The effects of iconic presentation on individuals [AD-A258785] p 133 N93-18949

**BARBER, JUDY**

Acceleration-induced effects on baboon blood chemistry p 376 A93-49224

**BARBER, JUDY A.**

Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400

**BARBIER, B.**

Multimodal dialog system for future cockpits p 146 N93-19773

**BARER, A. S.**

Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411

**BARFIELD, WOODROW**

The effect of geometric field of view and tunnel design for perspective flight-path displays [SAE PAPER 921131] p 291 A93-41319

**BARIN, MARCO**

Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture [SAE PAPER 921193] p 295 A93-41371

**BARKER, ROBERT S.**

Dew point analysis for Space Station Freedom [SAE PAPER 921227] p 296 A93-41401  
Comparative test data assessment and simplified math modelling for Sabatier CO2 reduction subsystem [SAE PAPER 921228] p 296 A93-41402

**BARKLEY, ROBERT**

Contaminant distribution and accumulation in water recycle systems [SAE PAPER 921360] p 307 A93-41519  
Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521

**BARLOW, LINDA S.**

Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 N93-29406

**BARNABA, JAMES M.**

KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 N93-10713

**BARNES, K. W.**

Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570

**BARNWELL, F.**

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439

**BARON, R.**

Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363

**BAROSS, JOHN A.**

Deep-sea smokers - Windows to a subsurface biosphere? p 397 A93-53284

**BAROUDI, DJEBAR**

Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161

**BARRAUD, P. A.**

Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870

**BARREAU, J. M.**

Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553

**BARRETT, EDWARD G.**

Lunar base pressure, O2 fraction, and ExtraHabitat Activity suit design p 346 A93-42125

**BARRON, CARLOS**

Preliminary design of a radiator shading device for a lunar outpost [NASA-CR-192016] p 139 N93-18019

**BARROWS, LINDA H.**

Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition [NASA-TP-3297] p 149 N93-20319  
Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 N93-23734

**BARRY, MATTHEW**

A decision-theoretic approach to the display of information for time-critical decisions: The Vista project p 367 N93-32152

**BARTA, DANIEL J.**

Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization [SAE PAPER 921391] p 309 A93-41549

**BARTEL, DAVID P.**

Isolation of new ribozymes from a large pool of random sequences p 400 A93-56548

**BARTHELEMY, KRISTEN K.**

Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice p 186 A93-27145

**BARTHELEMY, P.**

T wave changes in humans and dogs during experimental dives p 92 A93-20026

**BARTON, R. S.**

Design of a reading test for low vision image warping p 400 A93-53025

**BARTOSH, T. P.**

Regulation of the carbohydrate metabolism in humans residing in the North p 384 A93-51117

**BARTSCH, P.**

Does drinking protect against mountain sickness? p 382 A93-49565

**BASHINSKI, HOWARD S.**

Air Traffic Control facility lighting p 188 A93-27167

- BASSINGER, VIRGINIA J.**  
Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390
- BASTIN, PAUL**  
Rotational speed control p 365 N93-31457  
Vibration isolation p 365 N93-31458
- BASU, R.**  
Biological conversion of synthesis gas culture development [DE92-001279] p 6 N93-12482
- BATE, IAIN J.**  
Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223
- BATENCHUK-TUSKO, T. V.**  
The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242
- BATTLE, D. S.**  
Discomfort glare from high-intensity discharge headlamps: Effects of context and experience [PB93-174720] p 336 N93-30659
- BAUGHMAN, WAYNE A.**  
Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142
- BAUMEISTER, WOLFGANG**  
Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821
- BAYEVSKIY, R.**  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367
- BAZYLINSKI, DENNIS A.**  
Multiple evolutionary origins of magnetotaxis in bacteria p 153 A93-27799
- BEAR, MARK F.**  
Theory of synaptic plasticity in visual cortex [AD-A260052] p 224 N93-23960  
Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238
- BEARD, K. C.**  
The earliest fossil evidence for sexual dimorphism in primates p 152 A93-27775  
First skulls of the early Eocene primate *Shoshonius cooperi* and the anthropoid-tarsier dichotomy p 202 A93-32670
- BEBINOV, E. M.**  
Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165
- BECHLER, B.**  
Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684
- BECK, B. G.**  
Comparison of treatment strategies for space motion sickness p 386 A93-52402
- BECK, BRADLEY G.**  
Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 A93-30283
- BECK, L.**  
Influence of posture and prolonged head-down tilt on cardiovascular reflexes p 161 A93-28677  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681  
Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682  
Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683  
The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686  
Cardiovascular stress test with non-invasive techniques p 221 N93-24399
- BECKER, CHRISTOPHER H.**  
The fate or organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite p 110 A93-17984
- BECKER, LEWIS**  
Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- BEDNENKO, VIKTOR S.**  
Hypokinesia and weightlessness: Clinical and physiologic aspects [ISBN 0-8236-2415-3] p 87 A93-17897
- BEGAULT, DURAND R.**  
Headphone localization of speech stimuli p 176 A93-27143  
Perceptual effects of synthetic reverberation on three-dimensional audio systems p 257 A93-36583  
Headphone localization of speech p 394 A93-52507
- BEGIN, M.**  
Identification of a critical period for motor development in neonatal rats p 157 A93-28764
- BEHAR, ISAAC**  
The effects of pyridostigmine bromide on visual performance p 87 A93-18034
- BEHREND, A. F.**  
JSC ECLSS R/T program overview p 312 N93-27725
- BEISVAAG, T.**  
The USO-concept applied to a biological model experiment p 210 N93-24379
- BEJCZY, A. K.**  
Operator performance with alternative manual control modes in teleoperation p 390 A93-49397
- BEJCZY, ANTAL K.**  
Fusing human and machine skills for remote robotic operations p 137 A93-24994
- BEL'CHENKO, D. I.**  
Autorosette formation in the peripheral blood of people with lengthy limitations of motor activity p 250 A93-35245
- BELAKOVSKII, M. S.**  
The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216
- BELCHER, JEWELL G.**  
Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 N93-14870
- BELENKY, GREGORY**  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042
- BELINSKII, A. V.**  
Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel p 257 A93-36744
- BELL, BRIAN**  
Overconfidence, preview, and probability in strategic planning p 179 A93-27195
- BELLANTI, J. A.**  
Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 N93-11306  
Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine p 20 N93-11311
- BELLIVEAU, J. W.**  
Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566
- BELOUSOV, A. V.**  
Role of the central nervous system in the control of hibernation p 378 A93-51025
- BENAUDIA, M.**  
Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707
- BENEDICT, CHRISTIAN P.**  
Helmet-mounted systems test and evaluation process p 227 A93-30053
- BENHALLA, A.**  
Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707
- BENKE, TH.**  
COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569
- BENKE, THOMAS**  
Space and cognition - The measurement of behavioral functions during a 6-day space mission p 405 A93-55164
- BENNETT, BARBARA S.**  
Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533  
Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547
- BENNETT, KEVIN B.**  
Graphical displays - Implications for divided attention, focused attention, and problem solving p 102 A93-19984
- BENNETT, W. S., II**  
System automation and pilot-vehicle-interface for unconstrained low-altitude night attack p 320 N93-28867
- BENNETT, WINSTON R.**  
Introduction to training decisions modeling technologies: The training decisions system [AD-A249862] p 27 N93-12252
- BENOIT, SANDRA L.**  
Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights [AD-A264626] p 341 N93-30426
- BENOLKEN, MARTHA S.**  
Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176
- BENSAID, AMINE M.**  
A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267
- BENSEL, CAROLYN K.**  
Anthropometry of the foot and lower leg of U.S. Army soldiers: Fort Jackson, SC [AD-A261405] p 268 N93-26404
- BENSON, A. J.**  
Perceptual scaling of whole-body low frequency linear oscillatory motion p 379 A93-49225
- BENSON, BRIAN L.**  
Methods development for total organic carbon accountability [NASA-CR-184438] p 40 N93-12949  
The ECLSS advanced automation project evolution and technology assessment p 312 N93-27723
- BENTZ, JERRY**  
Large-screen-projection, avionic, and helmet-mounted displays: Proceedings of the Meeting, San Jose, CA, Feb. 26-28, 1991 [SPIE-1456] p 181 A93-26881
- BERARDO, PETER A.**  
Emergence of telerobotic control enhancement from research in machine autonomy p 183 A93-27028
- BERBAUM, KEVIN S.**  
Profile analysis of simulator sickness symptoms - Application to virtual environment systems p 381 A93-49399
- BERG, B. W.**  
Hemodynamic effects of altitude exposure and oxygen administration in chronic obstructive pulmonary disease p 383 A93-49571
- BERG, BRUCE G.**  
Classification of complex sounds [AD-A258405] p 122 N93-18223
- BERGAN, TONE**  
The psychological effects of isolation on a space station - A simulation study [SAE PAPER 921191] p 287 A93-41369
- BERGEN, JAMES**  
Human visual performance model for crewstation design p 182 A93-26887  
Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323
- BERGER, M.**  
AUDIMIR - Directional hearing at microgravity p 159 A93-26570  
Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- BERGH, KARE**  
Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190
- BERGMAN, T.**  
Plasmid encoded virulence of *Yersinia* [FOA-B-40419-4.4] p 275 N93-28199
- BERINGER, DENNIS B.**  
Effects of error-proofing and chemical/biological/radiation protective glove use on touch panel operation p 186 A93-27152
- BERKA, REGINALD B.**  
Development of a large space robot - A multi-segment approach. I [AIAA PAPER 93-1463] p 261 A93-34012  
Development of a large space robot - A multi-segment approach. II [AIAA PAPER 93-1464] p 262 A93-34013
- BERKE, LESLIE**  
Behavioral asymmetries of psychomotor performance in rhesus monkeys (*Macaca mulatta*) - A dissociation between hand preference and skill p 339 A93-44923
- BERKHOUT, JAN**  
Gloved operator performance study [AD-A256894] p 104 N93-16048
- BERKOVICH, YU. A.**  
The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410
- BERKOWITZ, JACK P.**  
Movement tracking performance as a function of required force level p 177 A93-27171
- BERMAN, J. D.**  
Walter Reed Army Institute of Research biannual report [AD-A255630] p 52 N93-14162
- BERNAUER, E. M.**  
Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 N93-12014
- BERNAUER, EDMUND**  
Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206

- BERRY, E. M.**  
A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918
- BERRY, I.**  
Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280
- BERRY, P.**  
Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280
- BERRY, WILLIAM E.**  
Human support for Mars exploration - Issues and approaches p 27 A93-12077
- BERTHON-JONES, MICHAEL**  
Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs p 79 A93-20037
- BESICH, W.**  
The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259
- BESKROVNI, O. M.**  
The state of the endocrine system of rats of different age under conditions of immobilization stress and biomas administration p 242 A93-35671
- BESSER, W. S.**  
Cases from the aerospace medicine resident's teaching file: Case No.51 - Hypercholesterolemia and heme positive stools in a 69-year-old aviator (clinical conference) p 165 A93-28702
- BESSOU, P.**  
Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407
- BEST, LEONARD G.**  
Low-cost monochrome CRT helmet display p 228 A93-30061  
Low-cost color LCD helmet display p 228 A93-30062  
Low-cost helmet-mounted displays [AD-A262616] p 317 N93-28479
- BETLACH, MICHAEL**  
Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training p 37 A93-14970
- BEYER, J.**  
Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028
- BEZBOGOV, A. A.**  
A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object p 364 A93-45685
- BEZDEK, JAMES C.**  
A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267
- BICE, DAVID E.**  
Beryllium toxicity - An update p 104 A93-20779
- BIE, PETER**  
Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620
- BIEDERMAN, IRVING**  
Psychophysical analyses of perceptual representations [AD-A255432] p 58 N93-14510
- BIERBAUM, CARL R.**  
Operator workload predictions for the revised AH-64A workload prediction model, volume 1 [AD-A254198] p 30 N93-10261  
Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H [AD-A254939] p 63 N93-12545
- BIERLING, L.**  
Manned Space-Laboratories Control Centre (MSCC) training p 339 A93-43330
- BIERMANN, PAUL J.**  
The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569
- BIERS, DAVID W.**  
A comparison of two scoring procedures with the NASA task load index in a simulated flight task p 349 A93-42849
- BIERSCHWALE, JOHN M.**  
Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155
- BIEZANOWSKA-TUSIEWICZ, EWA**  
Methodology for ergonomic tests of the information display on monitor indicators p 101 A93-18530  
Ergonomic aspects of the presentation of piloting-navigation information p 101 A93-18531
- BIGARD, A. X.**  
Protein requirements in hypoxia or hypokinesia p 368 N93-32244
- BIGBEE, LARRY R.**  
Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292
- BIGGERS, W. P.**  
Electronystagmography and audio potentials in space flight p 9 A93-11675
- BILARDO, VINCENT**  
Overview of NASA's 1991 Life Support Systems Analysis Workshop [SAE PAPER 921118] p 290 A93-41310
- BILARDO, VINCENT J., JR.**  
Regenerative life support technology challenges for the Space Exploration Initiative p 346 A93-42128
- BILICA, ROGER D.**  
Animal surgery in microgravity p 112 A93-24047  
Crew health p 217 N93-22630
- BILODEAU, JAMES W.**  
Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071  
Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080  
Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081
- BINGHAM, C.**  
Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439
- BINOT, R. A.**  
Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553
- BIOCCA, FRANK**  
Will simulation sickness slow down the diffusion of virtual environment technology? p 391 A93-49405
- BIRD, DONALD M.**  
Recovering potable water from wastewater in space platforms by lyophilization [SAE PAPER 921323] p 304 A93-41485  
Extraction of potable water from urine for space applications p 345 A93-42121
- BIRNBACH, RICHARD A.**  
Helicopter simulation: An aircrew training and qualification perspective p 342 N93-30676
- BISELLI, R.**  
Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303  
The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312
- BISELLI, ROBERTO**  
Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203  
Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305
- BISHOP, PHILLIP A.**  
Effects of fatigue and heat stress on vigilance of workers in protective clothing p 177 A93-27173  
Limitations to the study of man in space in the U.S. space program p 213 A93-30285
- BISHU, RAM R.**  
Investigation of the effects of Extra Vehicular Activity (EVA) and Launch and Entry (LES) gloves on performance p 266 N93-26061
- BISSON, ROGER U.**  
Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and nonfit men p 385 A93-52304  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265  
Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268
- BITSAKTIS, A.**  
Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318
- BITTEN, ROBERT E.**  
Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 N93-28870
- BITTLE, POLLY A.**  
Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332
- BITTON, D. F.**  
Head-up display standardization and the utility of analog vertical velocity information during instrument flight p 189 A93-27451
- BLABER, A.**  
Respiratory response to varying degrees of tilt and lower body negative pressure p 173 N93-21114
- BLACHE, DENIS**  
Free radical attack - Biological test for human resistance capability p 39 A93-17434
- BLACK, F. O.**  
Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750
- BLACK, F. OWEN**  
Role of orientation reference selection in motion sickness [NASA-CR-191912] p 124 N93-18596
- BLACKBURN, M. R.**  
A simple computational model of center-surround receptive fields in the retina p 336 N93-30515  
An algorithm for simple and complex feature detection: From retina to primary visual cortex [AD-A264306] p 337 N93-30897
- BLACKMAN, HAROLD S.**  
Insights into pilot situation awareness using verbal protocol analysis p 175 A93-27138
- BLACKNALL, CAROLYN**  
Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081
- BLAGININ, A. A.**  
Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots p 91 A93-18416
- BLAINE, G. JAMES**  
Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551
- BLAKE, T. A.**  
Optimal design of composite hip implants using NASA technology p 174 N93-22188
- BLANCHARD, L. A.**  
Biophysical model for handwear insulation testing [AD-A262926] p 320 N93-28884
- BLANCHARD, LAURIE A.**  
Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise [AD-A259068] p 124 N93-19072
- BLANCHARD, ROBERT E.**  
Accident proneness: A research review [DOT/FAA/AM-93/9] p 288 N93-28622
- BLANCO, JOSE**  
Psychiatric diagnoses aboard an aircraft carrier p 57 A93-16162
- BLATT, S. P.**  
Coccidioidomycosis - A persistent threat to deployed populations p 380 A93-49228
- BLEWETT, CAMERON**  
Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery p 326 A93-44176
- BLOIGU, RISTO**  
Determinants of +Gz-related neck pain - A preliminary survey p 380 A93-49227
- BLOMQUIST, C. G.**  
Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968  
Effects of head-down tilt for 10 days on the compliance of the leg p 162 A93-28680  
Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682  
Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685  
Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687  
Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688  
Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689
- BLOOM, T. F.**  
Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers p 168 A93-28739
- BLOSWICK, DONALD S.**  
Sudden loading and fatigue effects on the human spine [PB93-167526] p 286 N93-29199

- BLOWER, D. J.**  
Performance differences in psychomotor and dichotic listening tests among landing craft air cushion vehicle operator trainees p 177 A93-27174
- BLOWER, DAVID J.**  
Using constraint satisfaction networks to study aircrew selection for advanced cockpits [AD-A258151] p 140 N93-18293
- BLUEM, V.**  
CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 N93-24401  
Ecosystems on Earth and in space (the possible utilization of artificial ecosystems for space life support systems) p 236 N93-24406
- BLUME, H. T.**  
The USO-concept applied to a biological model experiment p 210 N93-24379  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382
- BLUMEN, I. J.**  
Flight physiology - Clinical considerations p 164 A93-28690
- BLUSZTAJN, J. K.**  
Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048
- BOBBA, FABIANA**  
Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture [SAE PAPER 921193] p 295 A93-41371
- BOCK, O.**  
Aimed arm movements under changed gravity p 193 N93-21113
- BOCK, OTMAR**  
Accuracy of aimed arm movements in changed gravity p 56 A93-16159
- BODE, ARTHUR P.**  
Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 N93-29620
- BODEK, ITAMAR**  
The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality [SAE PAPER 921266] p 300 A93-41436
- BODLAENDER, HANS L.**  
Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848
- BOEHM-DAVIS, DEBORAH A.**  
Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142
- BOEHM, ALBERT M.**  
Space Station Water Processor - Current flight design [SAE PAPER 921112] p 289 A93-41306
- BOEHM, H.-D. V.**  
Equipment, more or less ready to be used in helicopters p 148 N93-19785
- BOELIN, I.**  
Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 N93-28199
- BOGART, EDWARD H.**  
Identification of hazardous awareness states in monitoring environments [SAE PAPER 921136] p 287 A93-41324  
Method of encouraging attention by correlating video game difficulty with attention level [NASA-CASE-LAR-15022-1] p 288 N93-28128
- BOGOMOLOV, V. V.**  
Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401
- BOHNKER, BRUCE**  
Psychiatric diagnoses aboard an aircraft carrier p 57 A93-16162
- BOIARINOVA, M. V.**  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419
- BOICE, D. C.**  
Comets as a possible source of prebiotic molecules p 109 A93-17979
- BOLENDER**  
Mir 1992 operations and crew training p 226 N93-24352
- BOLL, PATRICIA A**  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265
- BOLL, PATRICIA A.**  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264  
Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268
- BOLLINGER, LANCE**  
Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774
- BOLSTAD, CHERYL A.**  
Individual pilot differences related to situation awareness p 175 A93-27137  
Human capabilities and limitations in situation awareness p 319 N93-28863
- BOMALASKI, S. H.**  
Thermal convergence fails to predict heat tolerance limits p 8 A93-10331
- BOMAN, DUANE**  
Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443
- BONDAR, R. L.**  
Cerebral autoregulation in microgravity p 173 N93-21112
- BONDAR, ROBERTA L.**  
Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533
- BONDAREV, I. P.**  
Adaptation of young pilots to new conditions of their work (Social-psychological aspects) p 256 A93-35220
- BONETSKII, A. A.**  
The effect of the activation of the sympatho-adrenal system on catecholamine inactivation in rat lungs p 2 A93-12864
- BONETTI, DENA M.**  
The effect of variable seat back angles on human response to +Gz impact accelerations [AD-A250673] p 31 N93-11559
- BONNER, WILLIAM A.**  
Terrestrial and extraterrestrial sources of molecular homochirality p 110 A93-17986
- BONTING, SJOERD L.**  
Space biology research development [NASA-CR-192830] p 244 N93-25242
- BOONSTRA, J.**  
Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715
- BOONSTRA, JOHANNES**  
Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214
- BOOTH, C. R.**  
New approaches to the measurement of chlorophyll, related pigments and productivity in the sea [NASA-CR-190879] p 42 N93-13612
- BOOTH, FRANK W.**  
Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy p 78 A93-20033
- BOPARAI, M. S.**  
Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125
- BORGHESE, JOSEPH B.**  
Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing [SAE PAPER 921299] p 303 A93-41464
- BORISOV, M.**  
Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- BOROWSKA, ZOFIA**  
Photo and thermal reactions of ferrous hydroxide p 269 A93-36561
- BORRELY, S. I.**  
Utilization of high energy electron beam in the treatment of drinking and waste water [DE92-642335] p 372 N93-32406
- BORTHWICK, DAWN E.**  
Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station [NASA-CR-192015] p 139 N93-17973
- BORTNIKOV, G. I.**  
Possible biological significance of the curvature of equipotential surfaces of gravity-force tidal variations p 324 A93-43025
- BORTNOVSKII, V. N.**  
The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257
- BOSMAN, D.**  
Engineering the visibility of small features on electronic flight displays p 144 N93-19758
- BOSMAN, R. A.**  
HERA - A reliable and safe space robot p 263 A93-35571
- BOSWELL, R. N.**  
Early markers of HIV infection and subclinical disease progression p 17 N93-11296
- BOUET, T.**  
Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553
- BOUSSION, X.**  
Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553
- BOULAY, WILLIAM**  
Design/development of an enhanced biodynamic manikin p 142 N93-19667
- BOURLAND, CHARLES T.**  
Space Station Freedom food management [SAE PAPER 921248] p 298 A93-41419
- BOUSSIF, A.**  
Lipodystrophies in the French military flight crew p 362 N93-32249
- BOVENZI, JAMES J.**  
Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188
- BOWEN, CHARLES D.**  
Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interfaces [AD-A254493] p 63 N93-12576  
Measures of user-system interface effectiveness: An encoding scheme and indicators for assessing the usability of graphical, direct-manipulation style user interfaces [AD-A260606] p 265 N93-25840
- BOWER, GORDON H.**  
Spontaneous discovery and use of categorical structure [AD-A261658] p 260 N93-26364
- BOWERY, NORMAN G.**  
Autoradiographic characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs [AD-A255607] p 54 N93-15009
- BOWSER, S. E.**  
Human perceptual deficits as factors in computer interface test and evaluation [DE92-019124] p 63 N93-12712
- BOYD, ROBERT**  
Human habitat design for the Space Exploration Initiative p 344 A93-41978
- BOYDA, ROBERT B.**  
Sabatier carbon dioxide reduction system for Space Station Freedom [SAE PAPER 921189] p 294 A93-41368
- BOZEMAN, RICHARD J., JR.**  
Control system and method for prosthetic devices [NASA-CASE-MSC-21941-1] p 106 N93-17087
- BRAAK, LAURENT**  
Biomedical engineering and space p 103 A93-20015
- BRACK, ANDRE**  
Water in the solar system and its role in exobiology; Proceedings of the European Geophysical Society General Assembly, 26th, Wiesbaden, Germany, Apr. 22-26, 1991 p 268 A93-36551  
Liquid water and the origin of life p 268 A93-36552  
Exobiology and terrestrial life p 237 N93-24405
- BRADLEY, BARBARA L.**  
The effects of cockpit heat on aviator sleep parameters p 371 N93-32266
- BRADLEY, R.**  
The development of an automated cell culture system for use in space life science research p 158 N93-21085
- BRADWAY, LEON**  
The US Navy Healthy Back Program: Effect on back knowledge among recruits [AD-A258368] p 121 N93-18210
- BRAEUCKER, RICHARD**  
Short-term microgravity to isolate graviperception in cells p 111 A93-21901  
Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548
- BRAIGHIN, MASSIMO**  
System integration and verification approach for the environmental control system of the Columbus Attached Pressurised Module [SAE PAPER 921261] p 299 A93-41431
- BRAIN, DAVID A.**  
A study of the effects of micro-gravity on seed germination p 40 N93-13167
- BRAINARD, GEORGE**  
Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses [AD-A254129] p 13 N93-10661

- BRANDENBERGER, G.**  
Nocturnal pituitary hormone and renin profiles during chronic heat exposure. p 387 A93-52619
- BRANTLEY, DOUGLAS K.**  
Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308
- BRATUS', L. V.**  
Mechanisms of the antihypoxic effect of taurine p 325 A93-43073
- BRAUN, DANIEL E.**  
Heat strain during at-sea helicopter operations and the effect of passive microclimate cooling p 7 A93-10330
- BRAUNE, ROLF J.**  
Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport [SAE PAPER 921133] p 291 A93-41321
- BRAZHNIKOVA, V. N.**  
Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165
- BRECHIGNAC, F.**  
A body mass measurement device based on the oscillation principle p 221 N93-24400
- BREIT, G. A.**  
Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295
- BRENNER, D. J.**  
Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784
- BRESNICK, TERRY A.**  
Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503
- BRESSAN, RAYMOND A.**  
Biomass productivity and sustainability of a bioregenerative life-support system [SAE PAPER 921359] p 307 A93-41518
- BRETOI, REMUS**  
Manned systems technology discipline p 314 N93-27860
- BRIARTY, L. G.**  
Development of Arabidopsis thaliana grown under microgravity conditions p 211 N93-24404
- BRIDGEMAN, BRUCE**  
Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 A93-51959
- BRIEGLEB, WOLFGANG**  
Some qualitative and quantitative aspects of the fast-rotating clinostat as a research tool p 375 A93-49209
- BRIGGS, R.**  
Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824
- BRILL, MICHAEL H.**  
Human vision, visual processing, and digital display II; Proceedings of the Meeting, San Jose, CA, Feb. 27-Mar. 1, 1991 [SPIE-1453] p 137 A93-25363
- BRINKLEY, JAMES W.**  
The effect of variable seat back angles on human response to +Gz impact accelerations [AD-A250673] p 31 N93-11559
- BRINKLEY, WILLIAM D.**  
Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin [AD-A258185] p 120 N93-17900
- BRION, GAIL M.**  
Contaminant distribution and accumulation in water recycle systems [SAE PAPER 921360] p 307 A93-41519  
Inactivation of a model coliphage virus in water by iodine [SAE PAPER 921361] p 274 A93-41520  
Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521
- BRISTOW, G. K.**  
Decrement in manual arm performance during whole body cooling p 88 A93-18038  
Effect of task complexity on mental performance during immersion hypothermia p 211 A93-30279
- BRISTOW, GERALD K.**  
A second postcooling afterdrop - More evidence for a convective mechanism p 44 A93-14969
- BRITTON, BRUCE K.**  
Expertise, text coherence, and constraint satisfaction: Effects on harmony and settling rate [AD-A262703] p 288 N93-28901
- BRIZZEE, KENNETH R.**  
The central nervous connections involved in motion induced emesis p 399 A93-55931
- BROACH, DANA**  
Contribution of personality to the prediction of success in initial air traffic control specialist training [DOT/FAA/AM-93/4] p 259 N93-26138
- BROADHURST, RICHARD S.**  
Retroperitoneal fibrosis as a cause of hypertension in an aviator - A case report p 212 A93-30284
- BROCK, THOMAS C.**  
Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (*Avena sativa*) p 358 A93-46472
- BROCK, THOMAS G.**  
Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*) p 329 A93-44941
- BRODY, WILLIAM R.**  
Automated system for early breast cancer detection in mammograms p 253 N93-25568
- BROEKMAN, D. M. A.**  
A new concept for helmet mounted vision p 145 N93-19767
- BROOKS, ANTOINE L.**  
Beryllium toxicity - An update p 104 A93-20779
- BROOKS, CAROLYN A.**  
A proposal to demonstrate production of salad crops in the Space Station Mockup Facility with particular attention to space, energy, and labor constraints [NASA-CR-192815] p 209 N93-23169
- BROOKS, FREDERICK P., JR.**  
Advanced technology for portable personal visualization [AD-A253808] p 32 N93-11783
- BROOKS, REBECCA B.**  
Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 N93-17857
- BROOKS, THURSTON L.**  
Operator vision aids for telerobotic assembly and servicing in space p 262 A93-35530  
Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981
- BROUNS, FRED**  
Energy expenditure climbing Mt. Everest p 92 A93-20031
- BROUWER, M. P. A. M.**  
The USO-concept applied to a biological model experiment p 210 N93-24379  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382
- BROWMAN, KAITLIN E.**  
Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 A93-51959
- BROWN, ALLAN H.**  
Centrifuges - Evolution of their uses in plant gravitational biology and new directions for research on the ground and in spaceflight p 376 A93-49211  
A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES) [NASA-CR-192219] p 114 N93-19377
- BROWN, ALLEN H.**  
Investigation of wheat coleoptile response to phototropic stimulations [NASA-CR-192157] p 114 N93-18608
- BROWN, CLIFFORD E.**  
Human performance data visualization for system design teams p 348 A93-42840  
Computer-supported collaborative work - A new agenda for human factors engineering p 348 A93-42841
- BROWN, D.**  
The development of an automated cell culture system for use in space life science research p 158 N93-21085
- BROWN, G. M.**  
Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 N93-26587
- BROWN, G. STEPHEN**  
Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551
- BROWN, GEORGE R.**  
Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 N93-11299
- BROWNSON, P.**  
Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664
- BROWSE, ROGER A.**  
Using tactile information in telerobotics p 138 A93-25482
- BRUBAKK, ALF O.**  
Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190
- BRUCE, REBEKAH J.**  
Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472
- BRUCE, ROBERT C.**  
X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 N93-18295
- BRUCKART, JAMES E.**  
Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308  
Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s [AD-A255691] p 52 N93-14103
- BRUNO, GUY**  
Real time proximity cues for teleoperation using model based force reflection p 184 A93-27033  
Intelligent robotics capabilities of the teleautonomy testbed p 184 A93-27035
- BRUNT, MARK**  
Advances in training technology and the role of the instructor p 98 A93-18775
- BRYFOGLE, MARK D.**  
Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598
- BRZEZINSKI, AMNON**  
Melatonin in human preovulatory follicular fluid p 215 A93-32474  
The pineal gland - Its possible roles in human reproduction p 204 A93-33036
- BUCHANAN, P.**  
Skeletal muscle responses to unloading with special reference to man p 166 A93-28718
- BUCK, COURTNEY A.**  
Hyperbaric treatment operations aboard Space Station Freedom [SAE PAPER 921142] p 292 A93-41328
- BUCKEY, J. C.**  
Effects of head-down tilt for 10 days on the compliance of the leg p 162 A93-28680  
The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686
- BUCKEY, JAY C.**  
Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968
- BUCKLEY, J. C.**  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681
- BUE, GRANT C.**  
ASDA - Advanced Suit Design Analyzer computer program [SAE PAPER 921381] p 308 A93-41539
- BUEKER, RICHARD**  
Health maintenance facility system effectiveness testing [NASA-TM-104737] p 372 N93-32328
- BUETHE, SCOTT**  
The USAF Test Pilot School flight control systems curriculum [AIAA PAPER 92-4067] p 24 A93-11253
- BUFFETT, A. R.**  
Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853
- BUGROV, S. A.**  
Occupational health problems in aviation medicine p 252 A93-36743  
Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401
- BUICK, F.**  
The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204
- BULA, R. J.**  
A matrix-based porous tube water and nutrient delivery system [SAE PAPER 921390] p 309 A93-41548  
Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997  
Potential of derived lunar volatiles for life support p 67 N93-13998
- BULEKBAEVA, L. EH.**  
Correlation between the lymph dynamics and venous pressure during short-term antihypertensive effects p 325 A93-43070



**BULGAJEWSKI, PETER J.**

Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF)  
[SAE PAPER 921186] p 294 A93-41365

**BULL, GEORGE C.**

Helmet mounted display with multiple image sources  
p 227 A93-30057

**BULLOCK, THEODORE H.**

Comparative analytical study of evoked and event related potentials as correlates of cognitive processes  
[AD-A261388] p 261 N93-26446

**BULYGINA, M. IU.**

Psychophysiological studies of acute hypoxic hypoxia  
p 91 A93-18417

**BUMBA, W.**

Development and implementation of the MotoMir experiment on the Mir Space Station  
p 220 N93-24363

**BUNGO, MICHAEL W.**

Blood and urine responses to ingesting fluids of various salt and glucose concentrations p 83 A93-17528  
Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530  
Pharmacologic considerations for Shuttle astronauts p 85 A93-17537  
Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551  
Cardiovascular physiology in space flight p 93 A93-20654

**BURAVKOVA, L. B.**

Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypostatic hypokinesia p 170 A93-28760

**BURGE, CAROL G.**

Human factors problems for aircrew-aircraft interfaces - Where should we focus our efforts? p 264 A93-37300

Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 N93-19759

**BURGE, JANET M.**

Living and working in space - Evolution of nursing in a new environment p 166 A93-28710

**BURGGRAF, SIGFRIED**

Life in hot springs and hydrothermal vents p 243 A93-36559

**BURIKOV, A. A.**

Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain p 77 A93-18300

**BURKE, DONALD S.**

AIDS/HIV in the US Military p 16 N93-11291

**BURKE, THOMAS G.**

<sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin  
[AD-A262979] p 284 N93-28293

**BURKOVSKAIA, T. E.**

Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212  
Healing of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260

**BURLATON, J. P.**

Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304  
Lipodystrophies in the French military flight crew p 362 N93-32249

**BURLATSKHOVA, N.**

Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362

**BURLEY, JAMES R., II**

Evaluation of conformational and body-axis attitude information for spatial awareness p 229 A93-30070  
Predictive nosepointing and flightpath displays for air-to-air combat p 229 A93-30071

**BURR, ROBERT E.**

Medical aspects of cold weather operations: A handbook for medical officers  
[AD-A263559] p 336 N93-30588

**BUSHOV, YU. V.**

Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115

**BUSQUETS, ANTHONY M.**

Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895  
Depth-viewing-volume increase by collimation of stereo 3-D displays p 407 A93-52915

**BUTCHER, H. K.**

The overview effect - The impact of space exploration on the evolution of nursing science p 155 A93-28722

**BUTKUS, KATHERINE**

An evaluation of miniaturized aircraft keyboards p 348 A93-42844

**BUTLER, BARCLAY PHELPS**

Helmeted head and neck dynamics under whole-body vibration p 264 N93-25531

**BUTLER, G. C.**

Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404

**BUTLER, JEREMY**

Airline training for advanced technology cockpits p 24 A93-13411

**BUTTO, S.**

HIV variability and perspectives of a vaccine p 16 N93-11294

**BYCHKOVA, E. IU.**

Dynamics of the central and peripheral circulation of active rats on the first day of antihypostatic hypokinesia (The role of training) p 242 A93-35261

**BYERS, JAMES C.**

Application and validation of workload assessment techniques  
[AD-A264575] p 366 N93-32012

**BYERS, S.**

Carbon monoxide exposure of subjects with documented cardiac arrhythmias  
[PB93-179943] p 337 N93-30890

**BYGBJERG, I.**

Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines p 280 A93-41123

**BYRNE, JENNIFER C.**

An analytical model of the aircrew oxygen breathing system p 137 A93-25123

**BYRNE, JOHN H.**

Analysis and synthesis of adaptive neural elements and assemblies  
[AD-A259954] p 219 N93-24247

**BYRNE, MARK T.**

Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)  
[AD-A253394] p 30 N93-10288

**C****CABALLERO, B.**

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048

A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918

**CABALLERO, BENJAMIN**

Differential effects of insulin resistance on leucine and glucose kinetics in obesity p 152 A93-27224  
Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029

**CABON, P.**

Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707  
Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267

**CABRAL, F.**

Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal p 164 A93-28699

**CADOGAN, DAVID**

Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems  
[SAE PAPER 921258] p 299 A93-41428

**CAINE, Y. G.**

Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729

**CAIOZZO, VINCE J.**

Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs p 326 A93-44183

**CAIRNS-SMITH, A. G.**

Mineral theories of the origin of life and an iron sulfide example p 74 A93-18009  
Future research p 74 A93-18010

**CALDARELLA, GERALD J.**

Studies of a laser/nuclear thermal hardened body armor  
[AD-A255128] p 34 N93-12423

**CALDEIRA, KEN**

The life span of the biosphere revisited p 149 A93-21847

**CALDERONE, JACK B.**

Factors influencing perceived angular velocity p 97 A93-17800

**CALDWELL, J. L.**

Documentation of activity and rest of a U.S. National Guard attack helicopter battalion p 9 A93-10338

The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600

Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment  
[AD-A259909] p 235 N93-23995

**CALDWELL, J. LYNN**

The effects of cockpit heat on aviator sleep parameters p 371 N93-32266

**CALDWELL, JOHN A.**

The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600

**CALDWELL, JOHN A., JR.**

Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots p 7 A93-10326

Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 N93-17817

The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness  
[AD-A263033] p 283 N93-27923

**CALDWELL, LYNN**

The physiological consequences of simulated helicopter flight in NBC protective equipment p 117 A93-24049

Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment  
[AD-A258502] p 129 N93-20400

**CALIANI, SILVESTRU**

Fractures of the vertebral column after ejection p 46 A93-15575

**CALKINS, D. S.**

Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750

Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704

**CALKINS, DICK S.**

Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153

**CALLAGHAN, THOMAS F.**

Operational space human factors - Methodology for a DSO  
[SAE PAPER 921156] p 293 A93-41339

**CAMM, A. J.**

Cardiac pacing and aviation p 215 A93-32778

**CAMMAROTA, JOSEPH P.**

The effect of G-LOC on psychomotor performance and behavior p 130 A93-25205

**CAMPBELL, BRUCE L.**

Helmet-mounted systems technology planning for the future p 227 A93-30052

**CAMPBELL, MARK R.**

Animal surgery in microgravity p 112 A93-24047

**CAMPIONE, MARINA**

Myosin and troponin changes in rat soleus muscle after hindlimb suspension p 273 A93-41124

**CANFIELD, DENNIS V.**

The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident  
[AD-A254550] p 49 N93-12612

Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis  
[AD-A255582] p 95 N93-16041

**CANNON-BOWERS, JANIS A.**

The role of mental models in team performance in complex systems p 262 A93-34985

**CAO, KE-YING**

Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs p 79 A93-20037

**CAPUTO, M.**

Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710

**CARDEN, JAMES R.**

Bar-holding prosthetic limb  
[NASA-CASE-MFS-28481-1] p 70 N93-14870

**CARDINALE, M. A.**

Kennedy Space Center environmental health program p 166 A93-28713

**CARETTI, DAVID M.**

Effect of protective clothing ensembles on artillery battery crew performance  
[AD-A254327] p 64 N93-12960

**CARLE, GLENN C.**

Exobiology in Solar System Exploration  
[NASA-SP-512] p 112 N93-18545  
Overview: Exobiology in solar system exploration p 112 N93-18546

**CARLILE, SIMON**

The effects of chronic hypoxia on human auditory system sensitivity p 89 A93-18041

## CARLSON, DENNIS L.

### CARLSON, DENNIS L.

Design of a resistive exercise device for use on the Space Shuttle  
[NASA-CR-192079] p 108 N93-17805

### CARMONA, J.

Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal p 164 A93-28699

### CARNES, JAMES R.

The ECLSS advanced automation project evolution and technology assessment p 312 N93-27723

### CARPENTER, SHELLEY

Kinetics of peptide hydrolysis and amino acid decomposition at high temperature p 411 A93-53289

### CARPITA, NICHOLAS C.

Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*) p 329 A93-44941

### CARR, CHARLES A.

Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 N93-17448

### CARR, SANDRA E.

Biofilm formation and control in a simulated spacecraft water system - Three year results  
[SAE PAPER 921310] p 303 A93-41472

### CARRETTA, THOMAS R.

Short-term retest reliability of an experimental U.S. Air Force pilot candidate selection test battery p 56 A93-15661

Recent developments in U.S. Air Force pilot candidate selection and classification p 97 A93-18046

Pilot Candidate Selection Method (PCSM): What makes it work?  
[AD-A262871] p 340 N93-29481

### CARROLL, AMY E.

Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers  
[NASA-CR-185679] p 34 N93-12195

Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system  
[NASA-CR-185689] p 34 N93-12211

### CARROLL, L. W.

Carbon monoxide exposure of subjects with documented cardiac arrhythmias  
[PB93-179943] p 337 N93-30890

### CARSWELL, C. M.

Choosing specifiers - An evaluation of the basic tasks model of graphical perception p 102 A93-19985

### CARTER, D. C.

Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 153 A93-28698

### CARTER, DANIEL C.

Atomic structure and chemistry of human serum albumin p 200 A93-31628

Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 A93-32850

Amino acid sequences for the binding regions in serum albumin proteins  
[NASA-CASE-MFS-28402-1] p 276 N93-28952

### CARTER, DAVID J.

Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots p 7 A93-10326

The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600

### CARTER, DONALD L.

Catalytic oxidation for treatment of ECLSS and PMMS waste streams  
[SAE PAPER 921274] p 301 A93-41443

Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate  
[SAE PAPER 921313] p 303 A93-41475

### CARTER, RUTH C.

Safety issues of manipulator systems under computer control p 192 A93-29121

### CASALE, E.

Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 153 A93-28698

### CASALE, ELENA

Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 A93-32850

### CASON, RANDALL W.

Helicopter night vision goggle testing in the United Kingdom p 148 N93-19917

### CASSONE, VINCENT M.

Melatonin, the pineal gland, and circadian rhythms  
[AD-A264099] p 337 N93-31061

### CASTELAIN, M.

Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776

### CASTELAIN, P. Y.

Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776

### CASTRO, NORMA I.

Preliminary design of a radiator shading device for a lunar outpost  
[NASA-CR-192016] p 139 N93-18019

### CATTANI, M.

Chiral-symmetry-breaking in nonequilibrium chemical systems - The racemization influence p 269 A93-36563

### CAVALETTI, G.

Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713

### CAVANAGH, P. R.

Simulating reduced gravity - A review of biomechanical issues pertaining to human locomotion p 289 A93-41175

### CAYCE, WALTER R.

Myocardial infarction occurring at the conclusion of centrifuge training in a 37-year-old aviator p 89 A93-18044

### CELIO, P.

The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259

### CERESIA, P. J.

The Canadian forces airsickness rehabilitation program, 1981-1991 p 89 N93-18042

### CERRETELLI, PAOLO

Protein absorption and energy digestibility at high altitude p 115 A93-21683

### CETINGUC, MUZAFFER

An assessment of Turkish Air Force pilots' anxiety and depression levels p 23 A93-10334

Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660

Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 N93-19709

Effectiveness of birthdate biorhythm theory on flight accidents p 127 N93-19710

### CHABANON, C.

Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 N93-19708

### CHACHULA, SANDRA K.

Performance measurement systems: A best practices study  
[AD-A262180] p 350 N93-29444

### CHADAKOV, M.

Influence of microgravity on immune system and genetic information p 160 A93-26572

### CHAITMAN, B. R.

Carbon monoxide exposure of subjects with documented cardiac arrhythmias  
[PB93-179943] p 337 N93-30890

### CHAMBERLAND, D.

Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715

### CHAMBERLAND, DENNIS

Advanced life support systems in lunar and Martian environments utilizing a higher plant based engineering paradigm  
[SAE PAPER 921286] p 302 A93-41452

### CHAMBERS, LAWRENCE P.

Life sciences utilization of Space Station Freedom p 205 N93-22622

### CHAMBERS, RANDALL M.

Individual differences in computerized test performance for systems integration in cockpit management p 177 A93-27176

### CHAMIS, CHRISTOS C.

Probabilistic simulation of the human factor in structural reliability p 365 N93-31573

### CHAMMAS, ELIE

Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044

### CHAN, GRACE

Industrial design influence on today's flight decks p 61 A93-14378

### CHAN, J. K.

On the control of a class of flexible manipulators using feedback linearization approach p 231 A93-31533

### CHANDANA, JAGDISH

Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125

### CHANDRASHEKHAR, Y.

Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125

### CHANG, C. A.

System for generating dynamic video imagery for human factors research  
[AD-A248675] p 31 N93-11743

### CHANG, CHI-MIN

ASDA - Advanced Suit Design Analyzer computer program  
[SAE PAPER 921381] p 308 A93-41539

### CHANG, CRAIG H.

Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing  
[SAE PAPER 921299] p 303 A93-41464

### CHANG, S. K.

Biophysical model for handwear insulation testing  
[AD-A262926] p 320 N93-28884

### CHANG, S.-R.

Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*) p 329 A93-44941

### CHANG, S.-W.

Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186

### CHANG, SHERWOOD

The Moon: Biogenic elements p 113 N93-18548

### CHANTON, JEFFREY P.

Methane transport mechanisms and isotopic fractionation in emergent macrophytes\* of an Alaskan tundra lake p 38 A93-16544

### CHAPARRO, A.

Colour is what the eye sees best p 159 A93-26245

The effects of luminance boundaries on color perception  
[AD-A250705] p 22 N93-11841

### CHAPES, S. K.

Effects of antihorostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693

Cytokine secretion by immune cells in space p 153 A93-28694

### CHAPIN, WILLIAM L.

Virtual environment display for a 3D audio room simulation p 408 A93-53125

### CHAPMAN, DAVID K.

Investigation of wheat coleoptile response to phototropic stimulations  
[NASA-CR-192157] p 114 N93-18608

A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES)  
[NASA-CR-192219] p 114 N93-19377

### CHAPMAN, F. W.

The advent of helmet-mounted devices in the combat aircraft cockpit - An operator's viewpoint p 227 A93-30056

### CHARLES, J.

Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710

### CHARLES, JOHN B.

Blood and urine responses to ingesting fluids of various salt and glucose concentrations p 83 A93-17528

Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530

Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547

Changes in total body water during spaceflight p 86 A93-17548

Cardiovascular adaptation to spaceflight p 86 A93-17550

Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551

Cardiovascular physiology in space flight p 93 A93-20654

Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122

### CHATURVEDI, ARVIND K.

Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations  
[DOT/FAA/AM-93/7] p 274 N93-27152

Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations  
[DOT/FAA/AM-93/8] p 283 N93-27158

### CHAU, ALBERT W.

Pilot performance with blood alcohol concentrations below 0.04 percent p 46 A93-16151

### CHEATHAM, JOHN B.

Grasp synthesis for planar and solid objects p 184 A93-27034

Testbed for remote telepresence research p 193 A93-29135

- CHEBOTAREV, EVGENII E.**  
Ion transport across membranes under exposure of the organism to ionizing radiation  
[ISBN 5-12-001601-4] p 243 A93-35679
- CHELAFLORES, J.**  
Spontaneous regulating mechanisms that may have led to the origin of life  
[DE93-603677] p 331 N93-31161
- CHELEN, WILLIAM**  
Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy p 211 A93-30278  
Phenytoin as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162
- CHELEN, WILLIAM E.**  
Spectral analysis of the electroencephalographic response to motion sickness p 116 A93-24041
- CHELETTE, TAMARA L.**  
Cerebral blood flow during 1Gz acceleration as measured by transcranial Doppler p 84 A93-17532  
Development of a tactile perceived attitude transducer [AD-A253724] p 25 N93-11081
- CHELI-MERCHEZ, M.**  
European astronaut candidates in training in the CIS p 256 A93-34593
- CHEN, CHUN-YU M.**  
Electrically modifiable nonvolatile SONOS synapses for electronic neural networks [AD-A258318] p 122 N93-18252
- CHEN, DI-MING**  
Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435
- CHEN, J. J.**  
Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721
- CHEN, JI-GUANG**  
Neurobehavioral test in civil aviation flight personnel p 223 A93-30443
- CHEN, JIN-DUN**  
Dynamic multiobjective decision and its application in environmental control and life support system p 230 A93-30439
- CHEN, L. X. Q.**  
Nonlinear optical properties of porphyrin and chlorophyll dimers studied by degenerated four wave mixing [DE93-006411] p 210 N93-24028
- CHEN, MEI**  
Radiation dose measurement and biostack experiment in biocabin on board satellite p 327 A93-44845
- CHEN, REN**  
A new protective breathing apparatus p 29 A93-13535
- CHEN, SHANGUANG**  
Study of overall analysis method of the man-machine-environment systems p 61 A93-14413  
Evaluation of speech technology for enhancing performance of man-machine systems p 350 A93-44846
- CHEN, Y. M.**  
Atrial natriuretic peptide degradation by CPA47 cells - Evidence for a divalent cation-independent cell-surface proteolytic activity p 155 A93-28726
- CHEN, YU-CHE**  
Grasp synthesis for planar and solid objects p 184 A93-27034
- CHEN, YU-CHUN**  
A four-pole electric swing and its application to the research on vestibular function p 103 A93-19999
- CHEN, YUNG**  
Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222
- CHENG, REI**  
Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700
- CHENG, ZILONG**  
A study of human brain somatosensory evoked potential and its application to man-machine-environment system engineering - Preliminary exploration of SEP in normal adult p 12 A93-13719
- CHEPRASOV, V. IU.**  
Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166
- CHERNIAKOV, I. N.**  
New aspects of using hyperbaric oxygenation in aviation medicine p 252 A93-36742
- CHEUNG, B. S. K.**  
Alterations of proprioceptive function in the weightless environment p 86 A93-17549
- CHEUNG, EDWARD**  
Recent developments at the Goddard Engineering Test Bed p 192 A93-29115
- CHIARAMONTE, JIM A.**  
The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness [AD-A263033] p 283 N93-27923
- CHIARENZA, O.**  
The European astronauts training programme p 226 N93-24346
- CHIASERA, AUGUST J.**  
Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658
- CHIEN, C. H.**  
An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137
- CHIMENTO, THOMAS**  
Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700
- CHIMONAS, E.**  
Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317
- CHIN, KERIC B. O.**  
Introduction to training decisions modeling technologies: The training decisions system [AD-A249862] p 27 N93-12252
- CHINKIN, A. S.**  
The adrenalin/noradrenalin and the alpha/beta adrenoreceptor correlations in the myocardium and the adrenergic chronotropic and ionotropic reactions under extreme conditions and during adaptation p 1 A93-10125
- CHINNIS, JAMES O., JR.**  
Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503
- CHIOU, PETER C.**  
Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598
- CHIRIKJIAN, GREG**  
Telerobot control mode performance assessment [AAS PAPER 92-053] p 392 A93-50593
- CHIRUVOLU, RAVI**  
Virtual display aids for teleoperation p 183 A93-27029
- CHOI, HONGYUNG**  
Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391
- CHONG, R.**  
Visual specification of robot motion p 348 A93-42845
- CHRIST, RICHARD E.**  
Application and validation of workload assessment techniques [AD-A264575] p 366 N93-32012
- CHRISTENS-BARRY, WILLIAM A.**  
Automated system for early breast cancer detection in mammograms p 253 N93-25568
- CHRISTENSEN, C. C.**  
Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243  
Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 N93-32261
- CHRISTENSEN, CAROL A.**  
Antagonistic otolith-visual units in cat vestibular nuclei p 199 A93-30511
- CHRISTENSEN, N. J.**  
Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096
- CHRISTENSEN, NIELS J.**  
Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620
- CHRISTOPHERSEN, A.**  
Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243
- CHROMIAK, JOSEPH**  
Mechanical stimulation of skeletal muscle increases prostaglandin F2(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism [NASA-CR-193041] p 282 N93-27102
- CHROMIAK, JOSEPH A.**  
Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis [NASA-CR-193040] p 222 N93-24763
- CHRYSTALL, KEITH**  
Knowledge-based task planning for the Special Purpose Dextrous Manipulator p 191 A93-29110
- CHUANG, SHERRY**  
Dark cycle monitoring of biological specimens on Space Station Freedom [SAE PAPER 921393] p 274 A93-41551
- CHUBB, C. B.**  
Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- CHUGUNOV, V. S.**  
The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241
- CHULKOVA, G. F.**  
Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenic layer of rat testes p 240 A93-35229
- CHUNG, H. M.**  
Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745
- CHURCH, T. O.**  
System automation and pilot-vehicle-interface for unconstrained low-altitude night attack p 320 N93-28867
- CHURIOLO, IU. K.**  
The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649
- CHYBA, CHRISTOPHER F.**  
The violent environment of the origin of life - Progress and uncertainties p 412 A93-53292
- CIAN, C.**  
Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870
- CINK, T. M.**  
Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574
- CINTRON, N. M.**  
Metabolic changes observed in astronauts p 84 A93-17535  
Alteration in human mononuclear leucocytes following space flight p 165 A93-28705
- CINTRON, NITZA M.**  
Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 N93-29502
- CIOLETTI, LOUIS A.**  
Microbiology operations and facilities aboard restructured Space Station Freedom [SAE PAPER 921213] p 296 A93-41389
- CISCON, LAWRENCE A.**  
A distributed telerobotics system for space operations p 192 A93-29132
- CLAPP, MITCHELL B.**  
The USAF Test Pilot School flight control systems curriculum [AIAA PAPER 92-4067] p 24 A93-11253
- CLAPPER, JOHN P.**  
Spontaneous discovery and use of categorical structure [AD-A261658] p 260 N93-26364
- CLARDY, W. F.**  
Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287
- CLARDY, WILLIAM F.**  
Susceptibility in USAF recruits to vaccine preventable diseases p 18 N93-11301
- CLARK, BENTON C.**  
Shielding strategies for human exploration missions [SAE PAPER 921376] p 308 A93-41534  
Human habitat design for the Space Exploration Initiative p 344 A93-41978
- CLARK, E. P.**  
Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL) p 39 A93-17429
- CLARK, J.**  
Medical evaluation of spatial disorientation mishaps p 134 N93-19703
- CLARK, JONATHAN B.**  
Spatial disorientation and dysfunction of orientation/equilibrium reflexes - Aeromedical evaluation and considerations p 8 A93-10336  
Risk assessment and clinical aeromedical decision-making p 385 A93-52305
- CLARK, WAYNE**  
Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 N93-23995
- CLARKE, A. H.**  
Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 386 A93-52405
- CLARKE, LAURENCE P.**  
A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267

## CLARKSON, G. J. N.

Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551

### CLARKSON, G. J. N.

The advent of helmet-mounted devices in the combat aircraft cockpit - An operator's viewpoint p 227 A93-30056

### CLARKSON, THOMAS W.

NASA Specialized Center for Research and Training (NSCORT) in space environmental health [SAE PAPER 921358] p 307 A93-41517

### CLAUSEN, E. C.

Biological conversion of synthesis gas culture development [DE92-001279] p 6 N93-12482

### CLERE, J. M.

G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775

### CLEVELAND, GARY A.

Distributed environmental control p 32 N93-11924

### CLULOW, JON

Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686

### COBB, B. L.

Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz [AD-A258136] p 120 N93-17985

### COBLENTZ, A.

Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707  
Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267

### COCHRAN, STEVEN D.

3-D surface description from binocular stereo p 61 A93-14727

### COGOLI, A.

Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684  
Space flight and immune system p 14 A93-11284

### COGOLI, AUGUSTO

Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission) p 200 A93-32071

### COGOLI, M.

Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684

### COGOLI, MARIANNE

The fast rotating clinostat - A history of its use in gravitational biology and a comparison of ground-based and flight experiment results p 376 A93-49212

### COHEN, BERNARD

NASA supporting studies for microgravity research on eye movements [NASA-CR-193233] p 285 N93-29041

### COHEN, M. M.

Visual and somesthetic influences on postural orientation in the median plane p 224 A93-32782

### COHEN, MARION F.

Auditory perception [AD-A255061] p 23 N93-12469

### COHEN, MARVIN S.

Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503

### COLAK, S.

Back ache in helicopter pilots p 382 A93-49566

### COLANGELO, TODD

SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 N93-18153

### COLASSON, M.

European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed [SAE PAPER 921200] p 295 A93-41376

### COLE, HAROLD

Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate [SAE PAPER 921313] p 303 A93-41475

### COLE, ROBERT E.

A low cost helmet-mounted camera/display system for field testing teleoperator tasks p 408 A93-53122

### COLICE, GENE L.

Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332

### COLIN, LARRY

Venus: A search for clues to early biological possibilities p 113 N93-18549

### COLLART, F. R.

Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552

### COLLET, JACQUES

The psychological challenge of space p 339 A93-42658

### COLLING, ARTHUR K., JR.

Space Station Water Processor - Current flight design [SAE PAPER 921112] p 289 A93-41306

### COLLINS, D. W.

Relationship between G + C in silent sites of codons and amino acid composition of human proteins p 358 A93-47099

### COLLINS, DANIEL L.

DoD space radiation concerns [AD-A253135] p 13 N93-10613

### COLLINS, JAMES A.

Time stress measurement devices for enhancement of onboard bit performance p 144 N93-19762

### COLLINS, S.

An introduction to the information processing components of the brain [RSRE-MEMO-4350] p 25 N93-10979

### COLLINS, WILLIAM E.

Poststrike air traffic control trainees - Biodemographic predictors of success in selection and screening p 56 A93-15664

Some personality and aptitude characteristics of Air Traffic Control Specialist trainees p 388 A93-52301

### COLOMBETTI, MARCO

Ontology of mind, subjective ontology, and the example of temporal expressions [REPT-92-018] p 26 N93-11212

### COLOMBINA, G.

EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory p 231 A93-31522

### COLOMBO, GERALD V.

Regenerable biocide delivery unit [NASA-CASE-MSC-21763-1-SB] p 112 N93-18351

### COLON, A. R.

The psychosocial adaptation of children in space - A speculation p 388 A93-50338

### COLON, P. A.

The psychosocial adaptation of children in space - A speculation p 388 A93-50338

### COLSON, P.

Zero-gravity underwater simulations for the Columbus programme - Outcome of the first campaigns p 62 A93-17075

### COLTON, JOEL S.

Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 N93-30882

### COLVIN, CARAN

Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools [AD-A264571] p 363 N93-32011

### COM, J.

Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776

### COMBS, CAROL A.

Conference on Correlations of Aging and Space Effects on Biosystems, Oct. 30-Nov. 1, 1989, Proceedings p 79 A93-20651

### COMPATORE, CARLOS A.

Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator [AD-A258012] p 119 N93-17817

The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness [AD-A263033] p 283 N93-27923

### CONE, SCOTT M.

Attitude awareness enhancements for the F-16 head-up display [AD-A260280] p 236 N93-24168

### CONFORTO, A. M.

On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858

### CONGER, BRUCE C.

ASDA - Advanced Suit Design Analyzer computer program [SAE PAPER 921381] p 308 A93-41539

### CONKIN, JOHNNY

Failure of the straight-line DCS boundary when extrapolated to the hypobaric realm p 47 A93-16154

### CONKLIN, MARLEN Z.

Operator Performance Support System (OPSS) p 196 N93-22195

### CONLAY, L. A.

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048  
Alanine increases blood pressure during hypotension p 203 A93-33027

### CONNELL, LINDA J.

Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276

### CONNORS, MARY M.

NASA/NSF Workshop on Antarctic Research p 81 N93-16803

### CONSTABLE, S. H.

Intermittent cold exposure causes a muscle-specific shift in the fiber type composition in rats p 378 A93-52618

### CONVERTINO, V.

Cardiovascular physiology - Effects of microgravity p 166 A93-28719

### CONVERTINO, V. A.

Altered baseline blood volume and the norepinephrine response to stress in humans p 43 A93-14123  
Carotid-cardiac baroreflex response and LBNP tolerance following resistance training p 164 A93-28696  
Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781

### CONVERTINO, VICTOR A.

Effects of acute exercise on attenuated vagal baroreflex function during bed rest p 48 A93-16160

### CONWAY, LYNN

Incorporating robot vision in tele-autonomous systems p 184 A93-27031

### CONWAY, MATTHEW

A literature survey for virtual environments - Military flight simulator visual systems and simulator sickness p 387 A93-49406

### CONWAY, TERRY L.

Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption [AD-A250648] p 23 N93-11893  
The US Navy Healthy Back Program: Effect on back knowledge among recruits [AD-A258368] p 121 N93-18210

### COOK, ANTHONY

A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 N93-24490

### COOK, GARY W.

Experimental studies on the origin of the genetic code and the process of protein synthesis - A review update p 73 A93-17822

### COOK, J. E.

Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 N93-12145

Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 N93-24021

### COOK, T. J.

Nutrition for a typical MAC crew during Desert Storm p 368 A93-32245

### COOK, TAMMY J.

The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas p 369 N93-32257

### COOKE, DOUGLAS

Future needs for space robots for SEI p 182 A93-27002

### COOLEY, C. G.

An integrated human/plant metabolic mass balance model p 347 A93-42130

### COOLEY, CAROLYN

Human habitat design for the Space Exploration Initiative p 344 A93-41978

### COOLEY, CAROLYN G.

Lunar base pressure, O2 fraction, and ExtraHabitat Activity suit design p 346 A93-42125

### COOPER, ERIC G.

Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments p 184 A93-27032

### COOPER, LEON N.

Theory of synaptic plasticity in visual cortex [AD-A260052] p 224 N93-23960

Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238

### COOTE, J. H.

Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569

### CORBIN, BARBARA J.

Defining contamination control requirements for non-human research on Space Station Freedom [SAE PAPER 921386] p 308 A93-41544

### CORDES, ED

Crew Health Care Systems installations for Space Station Freedom [SAE PAPER 921249] p 298 A93-41420

### CORNELISSEN, G.

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439

- CORNUM, RHONDA L.**  
The use of extended wear contact lenses in the aviation environment: An Army-wide study  
[AD-A260938] p 255 N93-26218
- CORNUM, RHONDA L. S.**  
Documentation of activity and rest of a U.S. National Guard attack helicopter battalion p 9 A93-10338
- CORNWALL, MARK W.**  
Electromyographic activity while performing the anti-G straining maneuver during high sustained acceleration p 47 A93-16155
- CORRIVEAU, P.**  
Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse p 157 A93-28752
- CORSICO, A.**  
In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automatized enzyme immunoassay method to dose specific IgE p 21 N93-11314
- CORSIN, ALAIN**  
Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 A93-14973
- COSTE, T.**  
Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567
- COSTES-SALON, MARIE-CLAUDE**  
Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161
- COTTET-EMARD, J. M.**  
Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030
- COTTET-EMARD, JEAN-MARIE**  
Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- COURT, L. A.**  
Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots p 401 A93-55163
- COWING, KEITH L.**  
Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458
- COWINGS, PATRICIA S.**  
Autogenic-feedback training - A treatment for motion and space sickness p 404 A93-55946
- COX, C. S.**  
Roles of water molecules in bacteria and viruses p 243 A93-36555
- COX, J. A.**  
Quantitative Helmet Mounted Display system image quality model p 229 A93-30068
- COX, R. G.**  
Treatment of human-computer interface in a decision support system [DE93-002281] p 237 N93-24502
- COYLE, EDWARD F.**  
Influence of graded dehydration on hyperthermia and cardiovascular drift during exercise p 44 A93-14971
- COYLE, SHAWN**  
Training for avionics evaluation [AIAA PAPER 92-4068] p 24 A93-11254
- COYNE, JOHN T.**  
Cognitive function at high altitude p 386 A93-52505
- CRABB, THOMAS M.**  
Overview of NASA's 1991 Life Support Systems Analysis Workshop [SAE PAPER 921118] p 290 A93-41310  
1991 NASA Life Support Systems Analysis workshop [NASA-CR-4466] p 310 N93-27100  
1992 NASA Life Support Systems Analysis workshop [NASA-CR-4467] p 310 N93-27101
- CRAIG, I.**  
Oculo-motor responses and virtual image displays p 319 N93-28862
- CRAMPTON, GEORGE H.**  
8-OH-DPAT does not interfere with habituation to motion-induced emesis in cats p 271 A93-38451  
Xylazine-emesis, yohimbine and motion sickness susceptibility in the cat p 324 A93-42450  
Buspirone blocks cisplatin-induced emesis in cats p 324 A93-42668  
Motion and space sickness [ISBN 0-8493-4703-3] p 402 A93-55929  
Neurophysiology of motion sickness p 399 A93-55932
- CRANDALL, C. G.**  
Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721
- CRANDALL, CRAIG G.**  
Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221
- Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and nonfit men p 385 A93-52304
- CRANE, J. ALLEN**  
Compliant walker [NASA-CASE-GSC-13348-2] p 53 N93-14708
- CRAVEN, R.**  
Visual specification of robot motion p 348 A93-42845
- CRAWFORD, D. W.**  
Wall shear stress estimates in coronary artery constrictions p 170 A93-28759
- CRAWFORD, ROBYN L.**  
Effects of display luminance on the recognition of color symbols on similar color backgrounds p 189 A93-27191
- CREA, THOMAS**  
A literature survey for virtual environments - Military flight simulator visual systems and simulator sickness p 387 A93-49406
- CRENSHAW, A.**  
Direct measurement of capillary blood pressure in the human lip p 279 A93-40550
- CRENSHAW, ALBERT G.**  
Transcapillary fluid responses to lower body negative pressure p 380 A93-49292
- CRENSHAW, JOHN, SR.**  
Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070  
Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071  
Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080  
Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081  
Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 N93-23082
- CRILL, PATRICK M.**  
Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake p 38 A93-16544
- CRISSEY, MONA J.**  
'Liveware' survey of human systems integration (HSI) tools p 349 A93-42847
- CRISTION, JOHN A.**  
Automatic detection of seizures with applications p 254 N93-25592
- CRISWELL-HUDAK, B. S.**  
Immune response during space flight p 94 A93-20664
- CRONCH, DANIEL F.**  
Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station [NASA-CR-192015] p 139 N93-17973
- CROSS, KENNETH D.**  
Training effectiveness assessment: Methodological problems and issues p 342 N93-30684
- CROW, S. A.**  
Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388
- CROWELL, JAMES A.**  
The perception of heading during eye movements p 99 A93-20692
- CROWLEY, JOHN**  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042
- CROWLEY, JOHN S.**  
Visual illusions and other effects with night vision devices p 230 A93-30072
- CROZATIER, BERTRAND**  
Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 A93-14973
- CRUMP, WILLIAM J.**  
A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization [SAE PAPER 921210] p 295 A93-41386  
ECLSS medical support activities [NASA-CR-184429] p 23 N93-12427
- CUCHE, J. L.**  
Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716
- CUCINOTTA, F. A.**  
Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073  
Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785  
Depth-dose equivalent relationship for cosmic rays at various solar minima p 391 A93-49564  
Human exposure to galactic cosmic rays in space p 410 A93-54887
- CUCINOTTA, FRANCIS A.**  
Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975  
Katz model prediction of Caenorhabditis elegans mutagenesis on STS-42 p 50 N93-13023  
Target fragmentation in radiobiology [NASA-TM-4408] p 124 N93-18381
- CUI, WEI**  
Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat p 327 A93-44844
- CULBERT, CHRIS**  
The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAN) p 258 N93-25595
- CULLINGFORD, HATICE**  
Crop growth and associated life support for a lunar farm p 67 N93-13994
- CUNNINGHAM, ROBERT K.**  
Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision [AD-A256059] p 58 N93-14580
- CUOMO, DONNA L.**  
Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interfaces [AD-A254493] p 63 N93-12576  
Measures of user-system interface effectiveness: An encoding scheme and indicators for assessing the usability of graphical, direct-manipulation style user interfaces [AD-A260606] p 265 N93-25840
- CURRY, DAVID**  
Handedness and motor programming effects of manual control and movement [AD-A264022] p 340 N93-30027
- CURTIS, ROBERT L.**  
Two phase fluid management for hydroponics [SAE PAPER 921163] p 294 A93-41345
- CURTIS, STANLEY B.**  
Single particle effects, Biostack, and risk evaluation - Studies on the radiation risk from Galactic cosmic rays p 202 A93-32243
- CUSHMAN, W. B.**  
Toward the ideal military aviation sunglass [AD-A258200] p 140 N93-18200
- CUSICK, ROBERT J.**  
Development of a regenerable metal oxide sheet matrix CO2 removal system [SAE PAPER 921298] p 302 A93-41463  
Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing [SAE PAPER 921299] p 303 A93-41464
- CUTCHIS, PROTAGORAS N.**  
Automatic detection of seizures with applications p 254 N93-25592
- CYMERMAN, ALLEN**  
Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042  
Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043  
Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120
- CYNADER, M. S.**  
Spectral motion produces an auditory after-effect p 405 A93-55579
- CZEISLER, CHARLES A.**  
Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658
- CZEKALSKI, BLAISE E.**  
Finite element analysis of a composite artificial ankle p 174 A93-22189
- CZERWINSKI, B. S.**  
Skin care in the space environment p 170 A93-28756

## D

## D'AMELIO, F.

- Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743

## D'AMELIO, RAFFAELE

- Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203

## D'ANDREA, JOHN A.

- Effects of laser glare on visual search performance p 180 A93-28158

## D'AURIA, RENATO

- Environmental control of the Mini Pressurized Logistic Module [SAE PAPER 921281] p 302 A93-41449

## DAANEN, H. A. M.

- Comparison of four noninvasive rewarming methods for mild hypothermia p 88 A93-18037

## DAGA, ANDREW W.

- Evolving concepts of lunar architecture: The potential of subelene development p 107 N93-17447

## DAGA, MERYL A.

- Evolving concepts of lunar architecture: The potential of subelene development p 107 N93-17447

## DAGNINO, ALDO

- Knowledge-based task planning for the Special Purpose Dextrous Manipulator p 191 A93-29110

## DAHL, SUSAN

- CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180

## DAHLSTEDT, SVEN

- Up/down in (im)possible flight attitude indicators - Some effects of colour, shape and pattern p 185 A93-27128

## DAHMS, T. E.

- Carbon monoxide exposure of subjects with documented cardiac arrhythmias [PB93-179943] p 337 N93-30890

## DALEE, ROBERT C.

- Development of membrane gas removal technology for microgravity liquid flow systems [SAE PAPER 921162] p 294 A93-41344

## DALEY, P. C.

- Intelligent robotics capabilities of the teleautonomy testbed p 184 A93-27035

## DALL-BAUMAN, L.

- Zero-G life support for Space Station Freedom p 233 N93-22640

## DALL-BAUMAN, LIESE

- Conceptual design of ECLSS microgravity test beds [SAE PAPER 921164] p 294 A93-41346

## DALL-BAUMAN, LIESE A.

- Modeling of membrane processes for air revitalization and water recovery [SAE PAPER 921352] p 306 A93-41511

## DALLMAN, M. F.

- Drug effects on orthostatic intolerance induced by bedrest p 86 A93-17544

## DALTON, BONNIE P.

- The General Purpose Work Station, a spacious microgravity workbench [SAE PAPER 921394] p 309 A93-41552

## DAMELIO, R.

- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303  
The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312

## DAMELIO, RAFFAELE

- Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305

## DAMIAN, K.

- The training of the new astronaut candidates at EAC p 129 A93-23693  
The European astronauts training programme p 226 N93-24346

## DANDOLOV, I.

- Moistening of the substrate in microgravity p 135 A93-21906  
Dynamics of the controlled environment conditions in 'SVET' greenhouse in flight p 152 A93-27460

## DANDREA, J. A.

- Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz [AD-A258136] p 120 N93-17985

## DANGELO, L.

- The USO-concept applied to a biological model experiment p 210 N93-24379  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382

## DANIEL, ROY M.

- Modern life at high temperatures p 74 A93-18003  
Future research p 74 A93-18010

## DANIEL, ROBERT

- The Space Station Remote Manipulator System p 138 A93-25487

## DANNENBERG, KONRAD K.

- A study of the effects of micro-gravity on seed germination p 40 N93-13167

## DAROS, D. A.

- Stimulus presentation formats and measurement techniques for the quantification of target detection performance [AD-A258933] p 133 N93-19449

## DAS, H.

- Operator performance with alternative manual control modes in teleoperation p 390 A93-49397  
Integrated tools for teleoperated satellite repair p 409 A93-54845

## DAS, HARI

- Man-machine cooperation in advanced teleoperation p 366 N93-32106

## DASHEVSKII, B. S.

- Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

## DASKALOPOULOS, C.

- Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 N93-32256

## DASKALOPOULOS, CH.

- Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318

## DAUNTON, N. G.

- Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743

## DAUNTON, NANCY G.

- Antagonistic otolith-visual units in cat vestibular nuclei p 199 A93-30511  
Animal models in motion sickness research p 399 A93-55936

## DAVENPORT, MARK

- The effect of low blood alcohol levels on pilot performance in a series of simulated approach and landing trials p 179 A93-27453

## DAVENPORT, RONALD J.

- Integrated oxygen recovery system [NASA-CR-192343] p 234 N93-22663  
Integrated oxygen recovery system [NASA-CR-192982] p 267 N93-26088

## DAVIDSON, LAARNI

- The development of an atmosphere composition monitor for the Environmental Control and Life Support System [SAE PAPER 921149] p 292 A93-41333

## DAVIDSON, SHAYLA

- The locator system for wandering individuals [NASA-TM-104754] p 31 N93-11649

## DAVIDSON, WILLIAM L.

- Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071  
Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080  
Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081

## DAVIES, D. R.

- Cognitive predictors of vigilance p 287 A93-40771

## DAVIS, BRIAN L.

- Simulating reduced gravity - A review of biomechanical issues pertaining to human locomotion p 289 A93-41175

## DAVIS, J. R.

- Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704  
Comparison of treatment strategies for space motion sickness p 386 A93-52402

## DAVIS, JEFFREY R.

- Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 A93-30283

## DAVIS, LINDA J.

- Evaluation and estimation of handling qualities via statistical modeling of pilot response data [AD-A255324] p 69 N93-14548

## DAVIS, THOMAS P.

- Human stress - Measurement and consequences p 49 A93-17440

## DAVY, D. T.

- Optimal design of composite hip implants using NASA technology p 174 N93-22188  
Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085

## DAVYDOV, B. I.

- Pharmacological defense of the brain during radiation damage - Some arguments p 240 A93-35217

## DAVYDOV, G. A.

- Altitude stress and cosmonaut training p 262 A93-35235

## DAVYDOVA, N. A.

- Reaction characteristics of several neuroregulating systems of cosmonauts after a 366-day-long space flight p 45 A93-15167

## DAWN, FREDERIC S.

- Protective helmet assembly [NASA-CASE-MSC-21842-1] p 106 N93-17088

## DAWSON, MARY R.

- Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystriocomorphous rodent (Mammalia: Rodentia) p 328 A93-44903

## DE CALUWE, G. L. J.

- Studies towards the crystallization of the rod visual pigment rhodopsin p 1 A93-11150

## DE GRIP, W. J.

- Studies towards the crystallization of the rod visual pigment rhodopsin p 1 A93-11150

## DE GROOT, R. P.

- Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715

## DE GROOT, ROLF P.

- Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214

## DE LAAT, S. W.

- Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715

## DE LAAT, SIEGFRIED W.

- Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214

## DE PEUTER, W.

- EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory p 231 A93-31522

## DEADWYLER, SAM A.

- Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 N93-30594

## DEAKIN, R. S.

- Military aircrew head support system p 231 A93-31944

## DEAN, W. C.

- Zero gravity phase separator technologies - Past, present and future [SAE PAPER 921160] p 293 A93-41342

## DEANGELIS, C.

- The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312

- Cardiovascular risk factors in an Italian Air Force population: Preliminary report p 362 N93-32252

## DEANGELIS, CLAUDIO

- Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school p 368 N93-32248

## DEARBORN, A.

- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133

## DEATON, JOHN E.

- Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation p 186 A93-27148

- Reclined seating in advanced crewstations - Human performance considerations p 186 A93-27151

- Human performance in complex task environments: A basis for the application of adaptive automation [AD-A255067] p 35 N93-12486

## DEAVERS, MICHAEL B.

- An automated method for determining mass properties [AD-A259924] p 236 N93-24441

## DEBARRO, MARC J.

- Conceptual design of a lunar base thermal control system p 68 N93-14003

## DEBRINCAT, GARY A.

- Effects of gravity on gastric emptying, intestinal transit, and drug absorption p 85 A93-17543



- DECKE, L.**  
OPTOVERT: An AUSTROMIR 91 experiment -  
Oriental effects from optokinetic stimulation  
p 159 A93-26571
- DECOMBAZ, JAUQUES**  
Protein absorption and energy digestibility at high  
altitude p 115 A93-21683
- DEECKE, L.**  
Optovert: An AustroMir-1991 experiment. Oriental  
effects from optokinetic stimulation p 226 A93-24366
- DEGANI, ASAF**  
Cockpit checklists - Concepts, design, and use  
p 389 A93-52506
- DEGER, SAI T**  
Assessment of morale in Turkish Air Force pilots with  
two clinical psychological tests p 133 A93-19660
- DEGIOANNI, J. J.**  
Human performance and physiological function during  
a 24-hr exposure to 1 percent bromotrifluoromethane  
(Halon 1301) p 277 A93-39704
- DEIMLER, JAMES D.**  
Age 60 Project: Consolidated database experiments  
[HS-TR-8025-3C(R2)] p 314 A93-27851
- DEJOHN, C. A.**  
Effects of dextromethamphetamine on subjective  
fatigue  
[AD-A258252] p 119 A93-17822  
An analysis of a sustained flight operation training  
mission in Navy attack aircraft  
[AD-A258199] p 131 A93-18205  
A computer-based visual analog scale  
[AD-A258152] p 122 A93-18280  
Subjective fatigue in A-6, F-14, and F/A-18 aircrews  
during operations Desert Shield and Storm  
[AD-A259243] p 171 A93-20580  
Simulated sustained flight operations and performance.  
Part 1: Effects of fatigue  
[AD-A261012] p 266 A93-25859
- DEKLUNDER, GHISLAINE**  
Intracardiac hemodynamics in man during short periods  
of head-down and head-up tilt p 117 A93-24044
- DELACROIX, MARION**  
Mechanisms of improved arterial oxygenation after  
peripheral chemoreceptor stimulation during hypoxic  
exercise p 331 A93-42188
- DELANY, JAMES P.**  
Nutrition and hydration status of aircrew members  
consuming the food packet, survival, general purpose,  
improved during a simulated survival scenario  
[AD-A258744] p 128 A93-20384
- DELENIAN, N. V.**  
Lipid peroxidation and the antioxidant defense system  
in rats after a 13-day flight on the Cosmos-1887  
biosatellite p 239 A93-35210
- DELONG, EDWARD F.**  
Multiple evolutionary origins of magnetotaxis in  
bacteria p 153 A93-27799
- DELRIE, DARCELLE M.**  
Effects of terfenadine and diphenhydramine on brain  
activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 A93-17817
- DELTRECCO, M.**  
In vivo and in vitro diagnosis of allergic respiratory  
disease during screening procedures in the Italian Navy:  
Comparative evaluation of a recent quantitative  
automatized enzyme immunoassay method to dose  
specific IgE p 21 A93-11314
- DEMCHENKO, I. T.**  
Intraslow bioelectric activity of the monkey's brain in  
the development of the high-pressure neural syndrome  
p 75 A93-18286  
Local blood supply of the brain of guinea pigs developing  
the high-pressure neural syndrome p 76 A93-18293
- DEMCHENKO, T. A.**  
Correlation between the lymph dynamics and venous  
pressure during short-term antiorthostatic effects  
p 325 A93-43070
- DEMEO, MARTHA E.**  
Active vibration damping of the Space Shuttle remote  
manipulator system p 231 A93-31993  
Human-in-the-loop evaluation of RMS Active Damping  
Augmentation  
[AIAA PAPER 93-3875] p 393 A93-51460
- DEMING, JODY W.**  
Deep-sea smokers - Windows to a subsurface  
biosphere? p 397 A93-53284  
Kinetics of peptide hydrolysis and amino acid  
decomposition at high temperature p 411 A93-53289
- DEMPSEY, JEROME A.**  
Determinants of poststimulus potentiation in humans  
during NREM sleep p 78 A93-20034
- DEMPSTER, WILLIAM F.**  
Biosphere 2 - Overview of system performance during  
the first nine months  
[SAE PAPER 921129] p 291 A93-41317
- DENARO, ANGELO**  
Environmental control of the Mini Pressurized Logistic  
Module  
[SAE PAPER 921281] p 302 A93-41449
- DENCKER, WALLY**  
The development of an atmosphere composition monitor  
for the Environmental Control and Life Support System  
[SAE PAPER 921149] p 292 A93-41333
- DENG, M. H.**  
Melatonin concentrations in the sudden infant death  
syndrome p 203 A93-33030
- DENG, MEI H.**  
Melatonin and its precursors in Y79 human  
retinoblastoma cells - Effect of sodium butyrate  
p 214 A93-32120
- DENG, MEI-HUA**  
Melatonin in human preovulatory follicular fluid  
p 215 A93-32474
- DENNISTON, CHARLES**  
Finite element analysis of a composite artificial ankle  
p 174 A93-22189
- DEOLIVEIRASAMPA, MARIA HELENA**  
Utilization of high energy electron beam in the treatment  
of drinking and waste water  
[DE92-642335] p 372 A93-32406
- DERDERIAN, S. S.**  
Hemodynamic effects of altitude exposure and oxygen  
administration in chronic obstructive pulmonary disease  
p 383 A93-49571
- DEREUS, A. J.**  
High-resolution contrast control on a video display:  
Method and calibration  
[AD-A256552] p 60 A93-15400
- DEROCHE, J.**  
Lipodystrophies in the French military flight crew  
p 362 A93-32249
- DEROSHIA, C. W.**  
Cerebral blood flow velocity in humans exposed to 24  
h of head-down tilt p 381 A93-49295
- DEROSHIA, CHARLES W.**  
Performance and mood-state parameters during 30-day  
6 deg head-down bed rest with exercise training  
p 281 A93-41169
- DES MARAIS, DAVID J.**  
Preservation of biological information in thermal spring  
deposits - Developing a strategy for the search for fossil  
life on Mars p 197 A93-28377
- DESGRES, J.**  
Clinical and diagnostic requirements - Biochemical  
exploration of amino acid metabolism, tRNA turnover and  
lymphocyte activation p 49 A93-17442
- DESHEVAIA, E. A.**  
Microflora of cabins of manned space objects and the  
problem of biological damage to the structural materials  
used in them p 262 A93-35237
- DESIDERIO, D. M.**  
Molecular mechanisms of stress p 49 A93-17443
- DESMOND, JEMETT L.**  
Acquisition of physiological data during G-induced Loss  
of Consciousness (G-LOC)  
[AD-A264492] p 335 A93-30400
- DEUTSCH-MCLEISH, MARY**  
Fuzzy neural network methodology applied to medical  
diagnosis p 334 A93-29546
- DEUTSCHMAN, ROBERT A., III**  
Pulmonary diffusing capacity, capillary blood volume,  
and cardiac output during sustained microgravity  
p 386 A93-52617
- DEVINCENZI, DONALD L.**  
Exobiology science objectives at a lunar base  
p 71 A93-17435
- DEVINE, JAMES**  
Effects of simulated high altitude exposure on  
long-latency event-related brain potentials and  
performance p 117 A93-24042
- DEVOS, G.**  
A new concept for helmet mounted vision  
p 145 A93-19767
- DEWBERRY, BRANDON S.**  
The ECLSS advanced automation project evolution and  
technology assessment p 312 A93-27723
- DEWEI, ZHAO**  
Postoperative hyperbaric oxygen treatment of peripheral  
nerve damage  
[AD-A255842] p 52 A93-14084
- DHADWAL, HARBANS S.**  
A fiber optic probe for the detection of cataracts  
p 254 A93-25593
- DHOPLE, ARVIND M.**  
Rapid susceptibility testing of mycobacterium avium  
complex and mycobacterium tuberculosis isolated from  
AIDS patients  
[NASA-CR-192382] p 172 A93-20736
- DI GIULIO, MASSIMO**  
The evolution of aminoacyl-tRNA synthetases, the  
biosynthetic pathways of amino acids and the genetic  
code p 73 A93-17825
- DI PIPPO, SIMONETTA**  
The strategic role of automation and robotics for  
Columbus utilization p 181 A93-26567
- DIAMANDIS, PETER H.**  
Orthostatic function during a stand test before and after  
head-up or head-down bedrest p 84 A93-17530
- DIAMANT, BRYCE L.**  
Technologies for ECLSS evolution  
p 311 A93-27720
- DIAMOND, STEVE D.**  
Automated system for analyzing the activity of individual  
neurons p 173 A93-22163
- DIAZ, MANUEL F.**  
Task-analytic evaluations of Space Station Freedom  
workstations p 187 A93-27157
- DICKENSON, REUBEN D.**  
A feasibility study of hand kinematics for EVA analysis  
using magnetic resonance imaging  
[SAE PAPER 921253] p 298 A93-41423
- DICKENSON, RUEBEN D.**  
EVA Glove Research Team  
[NASA-CR-193014] p 313 A93-27847  
A feasibility study of hand kinematics for EVA analysis  
using magnetic resonance imaging p 313 A93-27848
- DICKINSON, TERRY L.**  
Determinants of performance rating accuracy: A field  
study  
[AD-A264726] p 342 A93-30575
- DICKSON, KATHERINE J.**  
Publications of the Space Physiology and  
Countermeasures Program, Neuroscience Discipline:  
1980-1990  
[NASA-CR-4476] p 55 A93-15583  
Publications of the Space Physiology and  
Countermeasures Program, Cardiopulmonary Discipline:  
1980-1990  
[NASA-CR-4475] p 123 A93-18376
- DIDELOT, F.**  
Immunitization of personnel traveling to a destination in  
tropical countries: French position p 19 A93-11304
- DIDIER, M.**  
Suction-cup shoes for astronauts - A new method of  
foot restraint p 62 A93-17072
- DIENER, M.**  
Development of a 500 hPa shoulder joint for the  
European EVA Space Suit System  
[SAE PAPER 921257] p 299 A93-41427
- DIESPEROVA, E. EH.**  
Investigation of individual and typological features of an  
operator's nervous system under different work regimes  
p 339 A93-43024
- DIETZ, JOHN R.**  
Effects of hypoxemia at sea level and high altitude on  
sodium excretion and hormonal levels p 8 A93-10332
- DIFEE, GARY M.**  
Activity-induced regulation of myosin isoform distribution  
- Comparison of two contractile activity programs  
p 326 A93-44183  
Interaction of various mechanical activity models in  
regulation of myosin heavy chain isoform expression  
p 327 A93-44184
- DIKSHIT, PIYUSH**  
Architecture of autonomous systems  
[NASA-CR-192974] p 266 A93-26047
- DILLARD, T. A.**  
Hemodynamic effects of altitude exposure and oxygen  
administration in chronic obstructive pulmonary disease  
p 383 A93-49571
- DILLON, THOMAS J.**  
Goggles emergency release apparatus  
[AD-D015685] p 351 A93-29607
- DIMAROV, R. M.**  
Diurnal rhythmicity of human orthostatic stability  
p 250 A93-35253
- DINAUER, W. R.**  
A matrix-based porous tube water and nutrient delivery  
system  
[SAE PAPER 921390] p 309 A93-41548
- DISARIO, ROBERT**  
Instrument-approach-plate design considerations for  
displaying radio frequencies p 289 A93-39574
- DISMER, BERIT G.**  
Immobilized cell bioreactors for water reclamation -  
Process stability and effect of reactor design  
[SAE PAPER 921277] p 301 A93-41446
- DITTMAR, ANDRE**  
The influence of individual sensitivity to stress on the  
behavior (attitude and performance) of avoidance of an  
accident p 134 A93-19705

## DIVADEENAM, M.

### DIVADEENAM, M.

A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935

### DIZIO, P.

Influence of gravito-inertial force level on vestibular and visual velocity storage in yaw and pitch p 165 A93-28701

Gravito-inertial force level affects the appreciation of limb position during muscle vibration p 169 A93-28744

### DIZIO, PAUL

Spatial orientation, adaptation, and motion sickness in real and virtual environments p 382 A93-49403

### DLUSSKAIA, I. G.

Some biochemical and functional characteristics of body state during multi-hour operator activity under extreme conditions p 161 A93-27686

### DMITRIEVA, L. E.

Motor activity of animals under elevated pressure p 75 A93-18290

### DOBKIN, RICHARD

Enhanced performance using physiological feedback [AD-A258006] p 130 N93-17816

### DOBRYLKO, A. K.

A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302

### DODGE, ROBIN E.

Operational medicine on the lunar base p 48 A93-17430

### DOERR, D. F.

Biomedical engineering - A means to add new dimension to medicine and research p 190 A93-28717

Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781

### DOERR, DONALD F.

Effects of acute exercise on attenuated vagal baroreflex function during bed rest p 48 A93-16160

### DOERS, JESSE

Metabolic factors influencing myocardial recovery from acidosis (CIC3) [AD-A252376] p 14 N93-10796

### DOI, KUNIO

Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551

### DOKTYCZ, M. J.

Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 N93-26587

### DOKUNIN, IVAN V.

Functions simulation model of integrated regenerable life support system [SAE PAPER 921201] p 295 A93-41377

### DOLAN, M. J.

Early markers of HIV infection and subclinical disease progression p 17 N93-11296

### DOLGIN, D. L.

Performance differences in psychomotor and dichotic listening tests among landing craft air cushion vehicle operator trainees p 177 A93-27174

The unique contribution of selected personality tests to the prediction of success in naval pilot training [AD-A258144] p 132 N93-18291

### DOLGIN, DANIEL L.

The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training [AD-A258025] p 131 N93-17919

### DOLHERT, NANCY

The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299

### DOLL, SUSAN

TRIALSS - Tool for Rapid and Intelligent Advanced Life Support System Selection and Sizing [SAE PAPER 921123] p 291 A93-41315

### DOMBROWSKI, JUDY

Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt p 37 A93-14974

### DONALDSON, STEWART I.

Crew performance in Spacelab p 176 A93-27169

### DONINA, ZH. A.

Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation p 77 A93-18301

### DONNER, KIMBERLY A.

Display format and highlight validity effects on search performance using complex visual displays p 187 A93-27160

### DOOLEY, D. P.

Coccidioidomycosis - A persistent threat to deployed populations p 380 A93-49228

### DORR, D. W.

Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions [AIAA PAPER 92-4233] p 28 A93-13331

### DOSHAY, DAVID

Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities p 104 A93-20700

### DOUGHERTY, D. R.

An on-line water quality monitor for Space Station Freedom p 364 A93-46801

### DOUGHERTY, DALE R.

Continuous monitoring of effluent iodine levels of Space Station water using solid state technology [SAE PAPER 921265] p 299 A93-41435

### DOWELL, GENE L.

Rationale for a hyperbaric treatment capability at a Lunar Station p 213 A93-30286

### DREHNER, D. M.

Coccidioidomycosis - A persistent threat to deployed populations p 380 A93-49228

### DRESCHER, T. W.

Development of physical and mathematical models for the Porous Ceramic Tube Plant Nitrification System (PCTPNS) [NASA-TM-107551] p 4 N93-10085

### DREW, ANNETTE C.

Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia [AD-A255120] p 34 N93-12291

### DREW, MALCOLM C.

Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 N93-29216

### DRINKWATER, DONALD

Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686

### DRISS-ECOLE, D.

Gravity and root morphogenesis p 210 N93-24403

### DROMA, TARSHI

Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120

Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121

### DROPPERT, PIETER M.

A review of muscle atrophy in microgravity and during prolonged bed rest p 213 A93-30771

### DROZDENKO, RONALD

The challenge of biodetection for screening persons carrying explosives p 159 N93-21931

### DRUMMER, C.

Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685

Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688

### DRUMMER, CHRISTIAN

Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans p 381 A93-49293

### DRURY, COLIN G.

Errors in aviation maintenance - Taxonomy and control p 175 A93-27135

### DRUSANO, GEORGE L.

Optimal sampling theory and population modelling - Application to determination of the influence of the microgravity environment on drug distribution and elimination p 85 A93-17542

### DRYSDALE, ALAN

Controlled Ecological Life Support System (CELSS) modeling p 137 A93-25308

OCAM - A CELSS modeling tool: Description and results [SAE PAPER 921241] p 298 A93-41413

### DUBEY, R. V.

Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846

### DUBOSE, DAVID A.

Seasonal effects on human physiological adaptation factors, thermotolerance and plasma fibronectin p 47 A93-16157

### DUCHIER, J. L.

Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716

### DUDEK, H.-L.

Monitoring of pilot actions as part of a knowledge-based system for pilot assistance p 59 N93-15184

### DUDFIELD, HELEN J.

Colour head-up displays - Help or hindrance? p 187 A93-27154

### DUDLEY, G. A.

Carotid-cardiac baroreflex response and LBNP tolerance following resistance training p 164 A93-28696

Skeletal muscle responses to unloading with special reference to man p 166 A93-28718

### DUDLEY, GARY A.

Magnetic resonance imaging and electromyography as indexes of muscle function p 44 A93-14975

Mapping of electrical muscle stimulation using MRI p 279 A93-40549

### DUDLEY, ROSS A.

KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation [AD-A253931] p 30 N93-10713

### DUFFY, JEANNE F.

Research on sleep, circadian rhythms and aging - Applications to manned spaceflight p 94 A93-20658

### DULCHAVSKY, S. A.

Analysis of injuries following the crash of Avianca Flight 52 p 382 A93-49562

### DUNCAN, J.

The central executive component of working memory [AD-A258724] p 135 N93-20326

### DUNHAM, ANDREW

Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521

### DUNLAP, WILLIAM P.

An individual differences approach to fitness-for-duty assessment p 178 A93-27178

Prediction of motion sickness susceptibility p 403 A93-55940

### DUNN, ELIZABETH C.

The effects of iconic presentation on individuals [AD-A258785] p 133 N93-18949

### DUNN, KEVIN H.

Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF) [SAE PAPER 921186] p 294 A93-41365

### DUNNE, M. J.

Flight physiology - Clinical considerations p 164 A93-28690

### DUNPHY, P.

Cerebral autoregulation in microgravity p 173 N93-21112

### DUNPHY, PAUL T.

Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533

### DUNSKY, BETSY

Techniques for optimal crop selection in a controlled ecological life support system [NASA-TM-103950] p 33 N93-12018

### DUPUI, PHILIPPE

Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161

### DUQUE, P.

European astronaut candidates in training in the CIS p 256 A93-34593

### DURAN, F. A.

Treatment of human-computer interface in a decision support system [DE93-002281] p 237 N93-24502

### DURING, M.

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048

### DURING, MATTHEW J.

Dopamine release in rat striatum - Physiological coupling to tyrosine supply p 152 A93-27050

Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens p 201 A93-32118

Tyrosine - Effects on catecholamine release p 204 A93-33038

### DURLACH, NATHANIEL

Super auditory localization for improved human-machine interfaces [AD-A254699] p 34 N93-12229

### DURMOWICZ, ANTHONY G.

Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude p 326 A93-44181

### DURNFORD, S. J.

Disorientation and flight safety: A survey of UK Army aircrew p 133 N93-19680

### DURNOVA, G. N.

Healing of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260

### DURRANI, MOHAMMED

Design of a resistive exercise device for use on the Space Shuttle [NASA-CR-192079] p 108 N93-17805

### DUVOISIN, MARC R.

Magnetic resonance imaging and electromyography as indexes of muscle function p 44 A93-14975

### DUWE, H.

The USO-concept applied to a biological model experiment p 210 N93-24379

## PERSONAL AUTHOR INDEX

Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 N93-24382

**DVORETSKII, ANATOLII I.**  
Ion transport across membranes under exposure of the organism to ionizing radiation  
[ISBN 5-12-001601-4] p 243 A93-35679

**DVORNIKOV, M. V.**  
Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333

**DVORSKY, JAMES E.**  
Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21)  
[AD-A253393] p 30 N93-10217

**DYE, RAYMOND H.**  
Auditory processing of complex sounds across frequency channels  
[AD-A253612] p 13 N93-10650

**DYRE, BRIAN P.**  
The impact of visual noise on spatial orientation  
p 257 A93-36229

**DZHENZHERA, L. IU.**  
Some biochemical and functional characteristics of body state during multihour operator activity under extreme conditions  
p 161 A93-27686

## E

**EASTERWOOD, G. W.**  
Lunar base CELSS: A bioregenerative approach  
p 67 N93-13993

**EBENHOLTZ, SHELDON M.**  
Motion sickness and oculomotor systems in virtual environments  
p 381 A93-49400

**EBERHARDT, RALPH**  
NASA Specialized Center for Research and Training (NSCORT) in space environmental health  
[SAE PAPER 921358] p 307 A93-41517

**EBERHARDT, RALPH N.**  
Space habitat environmental health - A systems issue  
p 347 A93-42151

**ECK, JOHN D.**  
Protective helmet assembly  
[NASA-CASE-MSC-21842-1] p 106 N93-17088

**ECKARDT, K. U.**  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents  
p 331 A93-42191

**ECKBERG, D. L.**  
Influence of ten-day head-down bedrest on human carotid baroreceptor-cardiac reflex function  
p 161 A93-28678

**ECKBERG, DWAIN L.**  
Human autonomic responses to actual and simulated weightlessness  
p 85 A93-17540

**ECKER, JOHN A.**  
The design of mechanically compatible fasteners for human mandible reconstruction  
p 253 N93-25569

**ECKHARDT, BRADLEY D.**  
Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization  
[SAE PAPER 921391] p 309 A93-41549

**EDDINGTON, DONALD K.**  
Programmable interactive system for cochlear implant electrode stimulation  
[AD-A262558] p 333 N93-29421

**EDEEN, MARYBETH**  
Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design  
[SAE PAPER 921356] p 307 A93-41515

**EDEEN, MARYBETH A.**  
Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package  
[SAE PAPER 921122] p 291 A93-41314

A hybrid regenerative water recovery system for lunar/Mars life support applications  
[SAE PAPER 921276] p 301 A93-41445

Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models  
[SAE PAPER 921355] p 306 A93-41514

Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization  
[SAE PAPER 921391] p 309 A93-41549

**EDELMAN, N. H.**  
Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia  
p 79 A93-20038

**EDER, ARTUR H.**  
Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions  
p 354 A93-43792

**EDGAR, G. K.**  
Oculo-motor responses and virtual image displays  
p 319 N93-28862

**EDGERTON, V. R.**  
Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight  
p 272 A93-40548

**EDHAG, O. K.**  
Cardiac pacing and aviation  
p 215 A93-32778

**EDWARDS, ELIZABETH A.**  
Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents  
[AD-A255696] p 42 N93-14557

**EDWARDS, SHARON L.**  
Modeling the dynamics of mental workload and human performance in complex systems  
[AD-A258553] p 135 N93-19956

**EFIMOV, V. I.**  
Methodology for clinical testing of antiradiation means intended for manned space flight conditions  
p 249 A93-35236

**EGELAND, G. M.**  
Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers  
p 168 A93-28739

**EGELSEER, EVA**  
Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits  
p 243 A93-36557

**EGGEMEIER, F. T.**  
A comparison of two scoring procedures with the NASA task load index in a simulated flight task  
p 349 A93-42849

Recommendations for mental workload measurement in a test and evaluation environment  
p 394 A93-52504

Automatic information processing and high performance skills  
[AD-A258473] p 132 N93-18273

**EGGLESTON, ROBERT G.**  
Cognitive interface considerations for intelligent cockpits  
p 319 N93-28865

**EGOROV, A. D.**  
Main medical results of extended flights on Space Station Mir in 1986-1990  
p 386 A93-52401

**EGOZI, ARI**  
Looks can kill  
p 231 A93-31626

**EHNTHOLT, DANIEL J.**  
The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality  
[SAE PAPER 921266] p 300 A93-41436

**EHRENREICH, ARMIN**  
Ferrous iron oxidation by anoxygenic phototrophic bacteria  
p 271 A93-39280

**EICHSTADT, FRANK**  
Crew Health Care Systems installations for Space Station Freedom  
[SAE PAPER 921249] p 298 A93-41420

**EICHSTADT, FRANK T.**  
Glovebox design for Space Station Freedom Crew Health Care System  
[SAE PAPER 921139] p 292 A93-41326

**EIDSON, ARTHUR F.**  
Beryllium toxicity - An update  
p 104 A93-20779

**EILERSEN, N.**  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 N93-24382

**EISENHART, F. J.**  
Expertise, text coherence, and constraint satisfaction: Effects on harmony and settling rate  
[AD-A262703] p 288 N93-28901

**EISENSTARK, ABRAHAM**  
Detection of genetic effects of excess near-ultraviolet irradiation under exobiology conditions  
p 39 A93-17446

**EKLUND, WAYNE D.**  
Compliant walker  
[NASA-CASE-GSC-13348-2] p 53 N93-14708

**ELDER, GEOFFREY C. B.**  
Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery  
p 326 A93-44176

**ELDREDGE, DONALD**  
Human factors design principles for instrument approach procedure charts. Volume 1: Readability  
[AD-A257234] p 104 N93-15968

**ELFIMOV, A. I.**  
Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level  
p 44 A93-15165

**ELKINS, NANCY**  
Metabolic factors influencing myocardial recovery from acidosis (CIC3)  
[AD-A252376] p 14 N93-10796

**ELLEGAARD, P.**  
Arterial pulse pressure and vasopressin release in humans during lower body negative pressure  
p 360 A93-47096

**ELLIOTT, ANN R.**  
Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity  
p 386 A93-52617

**ELLIOTT, SIMON**  
Looks can kill  
p 231 A93-31626

**ELLIS, STEPHEN R.**  
Visual display aid for orbital maneuvering - Design considerations  
p 135 A93-23518

Visual display aid for orbital maneuvering - Experimental evaluation  
p 136 A93-23519

Pictorial communication in virtual and real environments  
[ISBN 0-74840-008-7] p 182 A93-26896

Exocentric judgements in real environments and stereoscopic displays  
p 189 A93-27190

The design of virtual spaces and virtual environments  
p 232 A93-33445

Operator-assisted planning and execution of proximity operations subject to operational constraints  
p 194 A93-21436

**ELLSWORTH, JON**  
Field test of a computer-driven tool to measure psychological characteristics of aircrew  
[AD-A264484] p 341 N93-30425

**ELTON, KAY F.**  
Orthostatic function during a stand test before and after head-up or head-down bedrest  
p 84 A93-17530

**EMEL'IANOV, A. IU.**  
Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots  
p 91 A93-18416

**EMERSON, TERRY**  
The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork  
[AD-A256192] p 69 N93-14520

**EMMERSON, PAUL**  
Vision modelling applications for display optimisation  
p 29 A93-13414

**EMSLIE, H.**  
The central executive component of working memory  
[AD-A258724] p 135 N93-20326

**ENDECOTT, BOYD R.**  
Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations  
[DOT/FAA/AM-93/7] p 274 N93-27152

Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations  
[DOT/FAA/AM-93/8] p 283 N93-27158

**ENDICOTT, J.**  
Results of a structured psychiatric interview to evaluate NASA astronaut candidates  
p 223 A93-32780

**ENDSLEY, MICA R.**  
Human capabilities and limitations in situation awareness  
p 319 N93-28863

**ENGEL, MICHAEL H.**  
Kinetics of peptide hydrolysis and amino acid decomposition at high temperature  
p 411 A93-53289

**ENGELKE, K. A.**  
Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics  
p 216 A93-32781

**ENGELMANN, U.**  
Sperm motility under conditions of weightlessness  
p 156 A93-28730

**ENGLAND, HARVEY M., JR.**  
Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft  
[AD-A253648] p 31 N93-11279

**ENGLAND, HARVEY, JR.**  
Comparison of portable crewmember protective breathing equipment (CPBE) designs  
[DOT/FAA/AM-93/6] p 310 N93-27121

**ENIN, L. D.**  
The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system  
p 2 A93-12861

**ENSOLI, FABRIZIO**  
Silent HIV infection  
p 16 N93-11293

**ERCOLINE, WILLIAM E.**  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict  
p 371 N93-32265

**ERCOLINE, WILLIAM R.**  
HUD climb/dive ladder configuration and unusual attitude recovery  
p 185 A93-27129

Head-up display standardization and the utility of analog vertical velocity information during instrument flight  
p 189 A93-27451

Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991  
p 133 N93-19679

Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display  
[AD-A264401] p 353 N93-30167

## ERETH, MARK H.

Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268

## ERETH, MARK H.

Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients p 88 A93-18036

## ERICKSEN, BRYCE J.

Low-cost monochrome CRT helmet display p 228 A93-30061

Low-cost color LCD helmet display p 228 A93-30062

Low-cost helmet-mounted displays [AD-A262616] p 317 N93-28479

## ERICKSON, J.

Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037

## ERICKSON, J. D.

An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137

## ERICKSON, JON D.

Future needs for space robots for SEI p 182 A93-27002

Cooperative intelligent robotics in space III; Proceedings of the Meeting, Boston, MA, Nov. 16-18, 1992 [SPIE-1829] p 190 A93-29101

Person-like intelligent systems architectures for robotic shared control and automated operations p 191 A93-29113

## ERICKSON, K.

Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 N93-28199

## ERNSTING, J.

Unconsciousness in flight and its prevention p 217 A93-32787

## ERTEM, G.

Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824

## ERTEM, GOZEN

The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs p 325 A93-43795

Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and other minerals p 412 A93-55998

## ESKEN, ROBERT L.

Methods for test and evaluation of night vision goggle integrated helmets p 188 A93-27182

## ESKEW, R. T., JR.

The effects of luminance boundaries on color perception [AD-A250705] p 22 N93-11841

## ESKEW, RHEA T., JR.

Colour is what the eye sees best p 159 A93-26245

## ESLINGER, ROBERT

The USAF Test Pilot School flight control systems curriculum [AIAA PAPER 92-4067] p 24 A93-11253

## ETTER, BRAD D.

Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 N93-29216

## EULER, J. A.

Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846

## EVANICH, PEGGY L.

Overview of NASA's 1991 Life Support Systems Analysis Workshop [SAE PAPER 921118] p 290 A93-41310

1991 NASA Life Support Systems Analysis workshop [NASA-CR-4466] p 310 N93-27100

1992 NASA Life Support Systems Analysis workshop [NASA-CR-4467] p 310 N93-27101

## EVANS, HARLAN J.

Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039

## EVANS, RICHARD H.

Head-up display standardization and the utility of analog vertical velocity information during instrument flight p 189 A93-27451

## EVANS, SUSAN M.

Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool [AD-A258531] p 195 N93-21753

## EVATT, B. L.

Fundamental diagnostic hematology: Anemia (second edition) [PB93-188662] p 338 N93-31140

Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) [PB93-188670] p 338 N93-31158

## EVERT, MARTHA F.

Consumables and wastes estimations for the First Lunar Outpost [SAE PAPER 921287] p 302 A93-41453

## EVONIUK, G.

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048

## EVTEEVA, M. S.

Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263

## EWALD, R.

Mir 1992 operations and crew training p 226 N93-24352

## EXTON, CARRIE

Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933

## EZUMI, K.

Visual search in virtual environments p 233 A93-33450

## F

## FADEN, A. I.

Secondary injury factors and preventative treatment [PB93-176014] p 283 N93-27409

## FAGHRI, A.

An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128

## FAHIM, A.

Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues [AIAA PAPER 93-1156] p 230 A93-31031

## FAITHFULL, N. S.

Increased plasma O2 solubility improves O2 uptake of in situ dog muscle working maximally p 111 A93-21684

## FALTISCO, ROBERT M.

Intelligent fault management for the Space Station active thermal control system p 32 N93-11930

## FAN, YA-MIN

The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690

## FANG, MEIKA

Cellular immunosenescence - An overview p 80 A93-20663

## FARACH, M.

A robust model for finding optimal evolutionary trees [DE93-010682] p 330 N93-30483

## FAREH, JEANNETTE

Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167

## FARLEY, CLAIRE T.

Energetics of walking and running - Insights from simulated reduced-gravity experiments p 116 A93-21687

## FARLEY, W. W.

Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity [AD-A255989] p 58 N93-14416

## FARMER, ERIC

Human performance assessment methods [AGARD-AG-308-ADD] p 133 N93-18868

## FARMER, JEFFERY T.

Conceptual design of a lunar base thermal control system p 68 N93-14003

## FARRACE, S.

Cardiovascular risk factors in an Italian Air Force population: Preliminary report p 362 N93-32252

## FARRACE, STEFANO

Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203

Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school p 368 N93-32248

## FARRELL, J. F.

The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 N93-19782

## FARUQUE, MONAZER

MAC to VAX connectivity: Heart rate spectral analysis system p 254 N93-25594

## FASZCZA, JEFFREY J.

Membrane technology for zero gravity life support systems [SAE PAPER 921320] p 304 A93-41482

## FATTOROSSO, A.

Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303

## PERSONAL AUTHOR INDEX

## FATTOROSSO, ANDREA

Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203

Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305

## FAUGHN, JIM A.

Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 N93-12960

## FAULK, D. M.

Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780

## FAVOT, J.-J.

Multimodal dialog system for future cockpits p 146 N93-19773

## FAVRON, M.

Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse p 157 A93-28752

## FEDERICO, M.

HIV variability and perspectives of a vaccine p 16 N93-11294

## FEDOROV, A. A.

A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727

## FEDOROV, B. M.

The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652

## FEDOROV, V. I.

The effect of the activation of the sympatho-adrenal system on catecholamine inactivation in rat lungs p 2 A93-12864

## FEDORUK, A. G.

Psychophysiological factors which impair the professional reliability of a pilot in emergency situations p 129 A93-23150

## FEDOTOVA, N. IU.

Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254

## FEELS, EDMOND

Psychiatric diagnoses aboard an aircraft carrier p 57 A93-16162

## FEGAN-MEYER, D.

Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133

## FEIGHAN, PATRICK

Knowledge-based task planning for the Special Purpose Dextrous Manipulator p 191 A93-29110

## FEIGMAN, E. E.

The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys p 75 A93-18289

## FELDBERG, RASMA

A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302

## FELDBERG, RASMA

Self-programming of matter and the evolution of proto-biological organizations [DE92-015244] p 5 N93-10628

## FELLOWS, MIKE R.

Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848

## FENDELL, F. E.

Pyrolysis of vegetation by brief intense irradiation p 324 A93-42915

## FEREBEE, ROBERT N.

Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 N93-26066

## FEREZOU, J.

Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567

## FERGUSON, BECKI

Phenytol as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162

## FERGUSON, E. B.

Health services at the Kennedy Space Center p 154 A93-28711

## FERIN, JURAJ

Potential health effects of fume particles on the crew of spacecrafts [SAE PAPER 921387] p 308 A93-41545

Potential health hazards from thermal degradation events - Particulate vs. gas phase effects [SAE PAPER 921388] p 282 A93-41546

## FERN, EDWARD

Protein absorption and energy digestibility at high altitude p 115 A93-21683

## FERNANDEZMUNOZ, FRANCISCO

Tobacco and health of the pilot [ETN-93-93693] p 217 N93-23414

- FERRALL, JOE**  
Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management  
[SAE PAPER 921119] p 290 A93-41311
- FERRALL, JOSEPH**  
Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems  
[SAE PAPER 921120] p 290 A93-41312
- FERRANDO, A. A.**  
Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570
- FERRANTI, MICHAEL J.**  
The effect of roll-stabilized sensor information on pilot performance p 175 A93-27130
- FERRARA, MARINO**  
Effects of air bubble contamination in recirculating water loop  
[SAE PAPER 921282] p 302 A93-41450
- FERRARI, ROBERTO**  
Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125
- FERRARO, J. S.**  
Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706
- FERRIERA, S.**  
Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms  
[AD-A259803] p 217 N93-23459
- FERRIS, J. P.**  
Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824
- FERRIS, JAMES P.**  
Chemical markers of prebiotic chemistry in hydrothermal systems p 74 A93-18006  
Future research p 74 A93-18010  
The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs p 325 A93-43795  
Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and other minerals p 412 A93-55998
- FESTER, DALE A.**  
Lunar base pressure, O<sub>2</sub> fraction, and ExtraHabitat Activity suit design p 346 A93-42125
- FETH, LAWRENCE L.**  
Demodulation processes in auditory perception  
[AD-A255748] p 54 N93-15053
- FEUILLOLEY, M.**  
Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561
- FIALA, GERHARD**  
Life in hot springs and hydrothermal vents p 243 A93-36559
- FIALA, JOHN**  
A manipulator control testbed - Implementation and applications  
[AAS PAPER 92-054] p 392 A93-50594
- FIEBER, JOSEPH P.**  
Lunar base requirements for human habitability p 345 A93-41995  
Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5  
[NASA-CR-192042] p 140 N93-18156
- FILBUM, THOMAS P.**  
Development of a regenerable metal oxide sheet matrix CO<sub>2</sub> removal system  
[SAE PAPER 921298] p 302 A93-41463
- FILIPENKOV, S. N.**  
Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411  
Ultrasonic location of gas bubbles in the vascular bed of a person working in a space suit p 262 A93-35239
- FILIPOVA, D. T.**  
Electromyographic investigations of tremor in aquanauts in simulated immersions p 90 A93-18292
- FINCH, GREGORY L.**  
Beryllium toxicity - An update p 104 A93-20779
- FINKENOR, JEFFREY**  
Wheels for wheelchairs and the like  
[NASA-CASE-MFS-28632-1] p 106 N93-17042
- FINE, BERNARD J.**  
Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 N93-32269
- FINKEL, LEIF H.**  
Computer simulations of object discrimination by visual cortex  
[AD-A253345] p 12 N93-10271
- FINKELSTEIN, JACOB**  
Potential health hazards from thermal degradation events - Particulate vs. gas phase effects  
[SAE PAPER 921388] p 282 A93-41546
- FINN, CORY**  
Techniques for optimal crop selection in a controlled ecological life support system  
[NASA-TM-103950] p 33 N93-12018
- FINNEY, BEN R.**  
Space migrations: Anthropology and the humanization of space p 105 N93-16862
- IORELLI, VALERIA**  
Silent HIV infection p 16 N93-11293
- IORENTINO, R.**  
A physician's workstation designed for NASA and earth-based applications p 189 A93-28695
- IOIRINI, P.**  
Integrated tools for teleoperated satellite repair p 409 A93-54845
- FIORINI, PAOLO**  
A procedure for the frequency analysis of telerobotic tasks data p 392 A93-50513  
Man-machine cooperation in advanced teleoperation p 366 N93-32106
- FIRBY, R. J.**  
An overview of the dynamic predictive architecture for robotic assistants p 181 A93-29112
- FIRTH, JOHN L.**  
The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989 p 118 A93-25201  
The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202
- FISCHER, G.**  
Symbolology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857
- FISHER, H. THOMAS**  
Simplified Aid For Crew Rescue (SAFR) p 313 N93-27793
- FISHER, JOHN**  
Water reclamation technology development for future long range missions  
[SAE PAPER 921351] p 306 A93-41510
- FISHER, SCOTT S.**  
Stereoscopic displays and applications III; Proceedings of the Meeting, San Jose, CA, Feb. 12, 13, 1992 [SPIE-1669] p 408 A93-53119
- FISK, ARTHUR D.**  
Contextual change and skill acquisition in visual search - Does the rate of change affect performance? p 178 A93-27187  
Disruption and maintenance of skilled visual search as a function of degree of consistency p 389 A93-52501  
Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks  
[AD-A257711] p 100 N93-17684  
Automatic information processing and high performance skills  
[AD-A258473] p 132 N93-18273
- FITTS, R. H.**  
Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity p 377 A93-49294
- FITZGERALD, KAREN A.**  
Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142
- FLACH, JOHN M.**  
Graphical displays - Implications for divided attention, focused attention, and problem solving p 102 A93-19984  
Perception/action: An holistic approach  
[AD-A259597] p 235 N93-24067
- FLADE, K.-D.**  
Mir 1992 operations and crew training p 226 N93-24352
- FLANAGAN, DAVID T.**  
Bifilm formation and control in a simulated spacecraft water system - Three year results  
[SAE PAPER 921310] p 303 A93-41472  
Regenerable Microbial Check Valve - Life cycle tests results  
[SAE PAPER 921316] p 303 A93-41478
- FLANNAGAN, M. J.**  
Discomfort glare from high-intensity discharge headlamps: Effects of context and experience  
[PB93-174720] p 336 N93-30659
- FLASCK, RICHARD A.**  
Large-screen-projection, avionic, and helmet-mounted displays: Proceedings of the Meeting, San Jose, CA, Feb. 26-28, 1991 [SPIE-1456] p 181 A93-26881
- FLEET, MARY L.**  
Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780
- FLEG, JEROME**  
Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- FLYNN, CHRISTOPHER F.**  
Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499  
Field test of a computer-driven tool to measure psychological characteristics of aircrew  
[AD-A264484] p 341 N93-30425
- FLYNN, MICHAEL T.**  
Water reclamation technology development for future long range missions  
[SAE PAPER 921351] p 306 A93-41510
- FOERG, SANDRA**  
Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air  
[SAE PAPER 921321] p 304 A93-41483
- FOERG, SANDRA L.**  
Modeling of membrane processes for air revitalization and water recovery  
[SAE PAPER 921352] p 306 A93-41511
- FOLDAGER, NIELS**  
Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620
- FOLEY, J.**  
Multi-function visor p 146 N93-19770
- FOLK, CHARLES L.**  
The role of spatial attention in visual word processing p 339 A93-44922
- FOLLENIUS, M.**  
Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619
- FOMICHEV, ALEKSANDR A.**  
Functions simulation model of integrated regenerable life support system  
[SAE PAPER 921201] p 295 A93-41377
- FOOTE, STEPHEN L.**  
Extrathalamic modulation of cortical function  
[AD-A255440] p 53 N93-14782
- FORCHUK, C.**  
The overview effect - The impact of space exploration on the evolution of nursing science p 155 A93-28722
- FORD, TAMERIA L.**  
Modification of yield and chlorophyll content in leaf lettuce by HPS radiation and nitrogen treatments p 328 A93-44880
- FORD, TIM**  
Biodegradation of materials in water reclamation systems  
[SAE PAPER 921311] p 303 A93-41473
- FORSBERG, A.**  
Plasmid encoded virulence of *Yersinia*  
[FOA-B-40419-4.4] p 275 N93-28199
- FORSBERG, AAKE**  
Intracellular targeting of the *Yersinia* YopE cytotoxin in mammalian cells induces actin microfilament disruption  
[FOA-B-40420-4.4] p 275 N93-27989
- FORSMAN, M.**  
Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan  
[FOA-B-40421-4.4] p 275 N93-28200  
Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia  
[FOA-B-40422-4.4] p 275 N93-28212
- FORSTER, ESTRELLA M.**  
The effect of G-LOC on psychomotor performance and behavior p 130 A93-25205
- FORSTER, ESTRELLA M.**  
Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness  
[AD-A255485] p 54 N93-14789
- FORTMANN, ROY C.**  
Survey of protocols for conducting indoor air quality investigations in large buildings  
[PB93-119865] p 194 N93-21215
- FORTNEY, SUZANNE**  
Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- FORTNEY, SUZANNE M.**  
Development of lower body negative pressure as a countermeasure for orthostatic intolerance p 83 A93-17529  
Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance p 280 A93-41119  
Transcapillary fluid responses to lower body negative pressure p 380 A93-49292

## FORTRAT, JACQUES O.

Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females  
[NASA-TP-3298] p 128 N93-20318

### FORTRAT, JACQUES O.

Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495

### FOSTER, RUSSELL G.

Photoreceptors regulating circadian behavior: A mouse model  
[AD-A264881] p 337 N93-30908

### FOSTER, SCOTT H.

Virtual environment display for a 3D audio room simulation p 408 A93-53125

### FOUGHT, DONALD E.

Line-of-sight determination in real-time simulations  
[AIAA PAPER 93-3567] p 406 A93-52666

### FOUILLOT, J. P.

Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 N93-19707  
Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267

### FOWLER, BARRY

The effects of hypoxia on auditory reaction time and P300 latency p 47 A93-16156

### FOWLKES, JENNIFER E.

Changes in the dark focus of accommodation associated with simulator sickness p 379 A93-49222  
Prediction of motion sickness susceptibility p 403 A93-55940

### FOX, PETER T.

Proceedings of Workshop 1: The Human Brainmap Database  
[AD-A260720] p 258 N93-25654

### FOX, ROBERT A.

Investigating motion sickness using the conditioned taste aversion paradigm p 400 A93-55937

### FOYLE, DAVID C.

Human factors issues in the use of night vision devices p 189 A93-27193  
Proposed evaluation framework for assessing operator performance with multisensor displays p 232 A93-33444

Visual cues in low-level flight - Implications for pilotage, training, simulation, and enhanced/synthetic vision systems p 264 A93-35918

### FRAMPTON, ROBERT F.

Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements  
[SAE PAPER 921347] p 305 A93-41506

### FRANCIS, COLIN M.

Space telerobotic research and applications at Space Systems/Loral  
[AAS PAPER 91-046] p 62 A93-15588

### FRANCOLINI, P.

Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302

### FRANKEL, RICHARD B.

Multiple evolutionary origins of magnetotaxis in bacteria p 153 A93-27799

### FRAPPIER, G.

The development of an automated cell culture system for use in space life science research p 158 N93-21085

### FRAZER, M.

Respiratory response to varying degrees of tilt and lower body negative pressure p 173 N93-21114

### FREEMAN, JAMES E.

Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991 p 133 N93-19679

### FREGOSI, RALPH F.

Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178

### FRENCH, J.

Nutrition for a typical MAC crew during Desert Storm p 368 N93-32245

### FRENCH, JONATHAN

Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses  
[AD-A254129] p 13 N93-10661

The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas p 369 N93-32257

Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264

C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265

Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268

### FRENCH, LLOYD

Timing considerations of Helmet Mounted Display performance p 233 A93-33449

### FRENCH, MARGARET

Electrically modifiable nonvolatile SONOS synapses for electronic neural networks  
[AD-A258318] p 122 N93-18252

### FRESA, MARK

Controlled Ecological Life Support System (CELSS) modeling p 137 A93-25308  
OCAM - A CELSS modeling tool: Description and results  
[SAE PAPER 921241] p 298 A93-41413

### FREY, M. A.

Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568

### FREY, MARY A.

Blood and urine responses to ingesting fluids of various salt and glucose concentrations p 83 A93-17528

### FREY, MARY A. B.

Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122

### FRIEDMAN, M. A.

Gray water recycling with a unique vapor compression distillation (VCD) design  
[SAE PAPER 921318] p 304 A93-41480

### FRIEND, JEFFREY A.

Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data  
[AD-A259684] p 234 N93-23660

### FRIESEN, DWAYNE T.

Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air  
[SAE PAPER 921321] p 304 A93-41483

A novel membrane device for the removal of water vapor and water droplets from air  
[SAE PAPER 921322] p 304 A93-41484

### FRIGERE, M.-F.

Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442

### FRIM, J.

Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits  
[AD-A262862] p 350 N93-29471

### FRISCH, PAUL H.

Design/development of an enhanced biodynamic manikin p 142 N93-19667

### FRITSCH, J. M.

Influence of ten-day head-down bedrest on human carotid baroreceptor-cardiac reflex function p 161 A93-28678

### FRITSCH, JANICE M.

Human autonomic responses to actual and simulated weightlessness p 85 A93-17540

### FROLOV, N. I.

The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit p 10 A93-12969

Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft p 45 A93-15175

### FROOM, P.

Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729

### FROST, S. J.

Atrial natriuretic peptide degradation by CPA47 cells - Evidence for a divalent cation-independent cell-surface proteolytic activity p 155 A93-28726

### FRYE, ROBERT J.

Closed ecological systems: From test tubes to Earth's biosphere p 315 N93-27976

### FRYSINGER, S.

Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502

### FUCHS, HENRY

Advanced technology for portable personal visualization  
[AD-A253808] p 32 N93-11783

### FUCHS, S. P.

Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065

### FUCHS, W.

Symbolology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857

### FUGLESANG, C.

European astronaut candidates in training in the CIS p 256 A93-34593

### FUHS, SUSAN

Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979

### FUJII, M. D.

Neurology of microgravity and space travel p 168 A93-28735

### FUJII, T.

CELSS nutrition system utilizing snails p 394 A93-52411

### FUJIWARA, T.

Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560

### FUJIYA, HIROTO

Ultrastructural and biochemical studies on muscle atrophy induced by suspension and suspension with denervation in lower limbs of rats p 200 A93-31530

### FUKUDA, YASUSHI

Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254

### FUKUDA, YASUSI

Research of a free-flying telerobot. V - Handling a target with multi-arms p 411 A93-56255

### FULCO, CHARLES S.

Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894

### FULLER, C. A.

Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706

### FUNK, GLENN A.

Defining contamination control requirements for non-human research on Space Station Freedom  
[SAE PAPER 921386] p 308 A93-41544

### FUNK, KENNETH H., II

Agent-based pilot-vehicle interfaces - Concept and prototype p 262 A93-34986

### FUNTOWA, I.

Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367

### FUSI, STAFANO

Constraints on learning in dynamic synapses  
[PREPRINT-890] p 100 N93-17026

## G

### GABOVA, A. V.

Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248

### GABRIELI, JOHN D. E.

Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 N93-32269

### GABRIELSEN, ANDERS

Central cardiovascular pressures during graded water immersion in humans p 402 A93-55457

### GABRYNOWICZ, J. I.

The province and heritage of mankind reconsidered: A new beginning p 69 N93-14018

### GADDY, J. L.

Biological conversion of synthesis gas culture development  
[DE92-001279] p 6 N93-12482

### GADKARI, KETAN

Conceptual design of a thermal control system for an inflatable lunar habitat module  
[NASA-CR-192014] p 140 N93-18113

### GADSBY, PETE

Crew Health Care Systems installations for Space Station Freedom  
[SAE PAPER 921249] p 298 A93-41420

### GAFFNEY, F. A.

Effects of head-down tilt for 10 days on the compliance of the leg p 162 A93-28680  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681  
The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686

Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689

### GAGNON, FAITH A.

Study design for microgravity human physiology experiments p 118 A93-25208

### GAIDA, M.

Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382

### GAISER, KAREN K.

The space life sciences strategy for the 21st century p 1 A93-10636

NASA's manned space flight program  
[AAS PAPER 91-626] p 402 A93-55805

### GALANTER, EUGENE

Decision paths in complex tasks  
[NASA-CR-192121] p 132 N93-18359



- GALBO, H.**  
Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines p 280 A93-41123
- GALEN, FRANCOIS-XAVIER**  
Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035
- GALEN, T. J.**  
Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705
- GALINDO, SAMUAL, JR.**  
Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400
- GALKIN, V. M.**  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419
- GALLAGER, SCOTT M.**  
How do zooplankton feed? A critical microgravity experiment p 158 A93-21097
- GALLAGHER, S. K.**  
Distribution of human waste samples in relation to sizing waste processing in space p 68 A93-14001
- GALLASCH, E.**  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 A93-24367
- GALLIMORE, J. J.**  
Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity [AD-A255989] p 58 N93-14416
- GALLOWAY, MARLA L.**  
Comparing the Cattell 16PF profiles of male and female commercial airline pilots p 178 A93-27177
- GAMACHE, GERALD L.**  
The effect of pain on task performance: A review of the literature [AD-A254336] p 59 N93-15216
- GANAPATHI, GANI B.**  
Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems [SAE PAPER 921120] p 290 A93-41312
- GANDER, D. V.**  
Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694
- GANDER, PHILIPPA H.**  
Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276
- GANDHI, P. A.**  
Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388
- GANTNER, T. E.**  
Quantification of human responses p 340 N93-29564
- GANTZ, DONALD T.**  
Evaluation and estimation of handling qualities via statistical modeling of pilot response data [AD-A255324] p 69 N93-14548
- GARCIA, HECTOR D.**  
Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals [SAE PAPER 921410] p 310 A93-41564
- GARCIA, J. A. AZOFRA**  
Survey of smoking habits in the Spanish Air Force p 370 N93-32262
- GARCIA, SHARON K.**  
Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC) [AD-A264492] p 335 N93-30400
- GARDIER, A. M.**  
Persistent blockade of potassium-evoked serotonin release from rat frontocortical terminals after fluoxetine administration p 202 A93-32125
- GARDINER, P. F.**  
Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse p 157 A93-28752
- GARDNER, R. H.**  
Scaling issues for biodiversity protection [DE92-016689] p 6 N93-12315
- GARGIOLI, EUGENIO**  
The effects of a reduced pressure scenario on the Columbus APM environmental control system [SAE PAPER 921247] p 298 A93-41418
- GARIEPY, PHILIPPE**  
Cardiovascular responses during recovery from exercise and thermal stress p 212 A93-30282
- GARLAND, JAY**  
Characterization of the water soluble component of inedible residue from candidate CELSS crops [NASA-TM-107557] p 139 N93-18111
- GARRISON, WILLIAM V.**  
Transfer effects of scene content and crosswind in landing instruction p 62 A93-15665
- GARTRELL, CHARLES F.**  
1991 NASA Life Support Systems Analysis workshop [NASA-CR-4466] p 310 N93-27100  
1992 NASA Life Support Systems Analysis workshop [NASA-CR-4467] p 310 N93-27101
- GATES, MICHELE M.**  
Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817
- GATEWOOD, OLGA B.**  
Automated system for early breast cancer detection in mammograms p 253 N93-25568
- GATRELL, LANCE**  
Accuracy of locating circular features using machine vision p 182 A93-27022
- GAUGER, ANITA K.**  
An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine p 360 N93-31917
- GAUQUELIN, GUILLEMETTE**  
Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495  
Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- GAUQUELINE, G.**  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207
- GAUTHIER, GABRIEL M.**  
Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks p 287 A93-41166
- GAUTIER, DANIEL**  
Titan p 114 N93-18553
- GAVACH, C.**  
Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553
- GAYDA, CHRISTIAN**  
DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field [ETN-93-93799] p 284 N93-28469
- GAZZANIGA, MICHAEL S.**  
Multimodal interactions in sensory-motor processing [AD-A255780] p 59 N93-15067
- GELEN, G.**  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133
- GEELS, SCOTT**  
Human habitat design for the Space Exploration Initiative p 344 A93-41978
- GEHRIG, W.**  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555
- GEHRKE, C. W.**  
Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442
- GEHRKE, CHARLES W.**  
A lunar-based chemical analysis laboratory [ISBN 0-937194-25-5] p 39 A93-17426
- GELLER, E. R.**  
Analysis of injuries following the crash of Avianca Flight 52 p 382 A93-49562
- GELLERT, MARTIN**  
DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580
- GENCO, LOUIS V.**  
Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1) p 284 N93-28740  
Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2) p 284 N93-28741
- GENTNER, FRANK C.**  
'Liveware' survey of human systems integration (HSI) tools p 349 A93-42847
- GEORGE, J. S.**  
Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566  
A weighted iterative algorithm for neuromagnetic imaging [DE92-040244] p 51 N93-13522
- GEORGINOV, A. A.**  
Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots p 91 A93-18416
- GERBER, N.**  
Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703
- GERSTENBLITH, GARY**  
Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- GERSTENBRAND, F.**  
COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569  
Space and cognition - The measurement of behavioral functions during a 6-day space mission p 405 A93-55164  
Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- GERZER, R.**  
Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-29685  
Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688
- GERZER, RUPERT**  
Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans p 381 A93-49293
- GEVINS, A. S.**  
Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1 [AD-A254138] p 25 N93-10662
- GEVINS, ALAN**  
Physiological indices of mental workload [AD-A261692] p 260 N93-26391  
The AFOSR Workshop on the Future of EEG and MEG [AD-A264338] p 335 N93-30160
- GHARIB, C.**  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207  
Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404
- GHARIB, CLAUDE**  
Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495  
Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- GHOSH, A.**  
Designs and development of a master-slave teleoperated robot p 390 A93-49357
- GHOSH, DAVE**  
Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms p 101 A93-18710
- GHOSHEH, NAJATI S.**  
Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (Avena sativa) p 329 A93-44941  
Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (Avena sativa) p 358 A93-46472
- GIANCASPRO, ANTONIO**  
A procedure for the frequency analysis of telerobotic tasks data p 392 A93-50513
- GIBBONS, D.**  
The development of an automated cell culture system for use in space life science research p 158 N93-21085
- GIBBS, W. N.**  
Fundamental diagnostic hematology: Anemia (second edition) [PB93-188662] p 338 N93-31140  
Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) [PB93-188670] p 338 N93-31158
- GIBEAU, DAVID M.**  
Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (Avena sativa) p 329 A93-44941
- GIBSON, C. R.**  
Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710
- GIBSON, EVERETT K., JR.**  
The Moon: Biogenic elements p 113 N93-18548
- GIBSON, RICHARD S.**  
An analytical study of the effects of age and experience on flight safety p 176 A93-27158
- GIBSON, TOM**  
An improved anthropometric test device p 143 N93-19670

## GIBSON, WILLIAM

### GIBSON, WILLIAM

Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses  
[AD-A254129] p 13 N93-10661

### GIESBRECHT, GORDON G.

A second postcooling afterdrop - More evidence for a convective mechanism p 44 A93-14969  
Decrement in manual arm performance during whole body cooling p 88 A93-18038  
Effect of task complexity on mental performance during immersion hypothermia p 211 A93-30279

### GILBERT, JOHN H., III

The influence of prior exercise at anaerobic threshold on decompression sickness p 8 A93-10333  
Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153

### GILBERT, JOYCE A.

The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068

### GILBERT, MICHAEL G.

Active vibration damping of the Space Shuttle remote manipulator system p 231 A93-31993  
Human-in-the-loop evaluation of RMS Active Damping Augmentation  
[AIAA PAPER 93-3875] p 393 A93-51460

### GILBERT, S. L.

Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783

### GILBOA, PINI

Designing the right visor p 181 A93-26885

### GILCHINSKII, D. A.

Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558

### GILLE, JENNIFER

Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443

### GILLEN, CHRISTOPHER M.

Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure p 281 A93-41168

### GILLEY, S. D.

Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations  
[SAE PAPER 921231] p 297 A93-41405

### GILLIATT, ROGER W.

An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination  
[AD-A264293] p 331 N93-30818

### GILLIGAN, LAWRENCE H.

Intensified CCD sensor applications for helmet-mounted displays p 228 A93-30064

### GILLINGHAM, KENT K.

Visual scene effects on the somatogravic illusion p 88 A93-18035  
Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991 p 133 N93-19679

### GIOVANNONI, F.

Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302

### GIRI, N. P.

Designs and development of a master-slave teleoperated robot p 390 A93-49357

### GIRTEN, B.

Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703

### GIUDICELLI, C. P.

Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304

### GLAISTER, D. H.

The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671

### GLASER, PETER E.

Mitigation of dust contamination during EVA operations on the moon and Mars p 345 A93-42107

### GLASS, J. D.

Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms  
[AD-A259803] p 217 N93-23459

### GLEASON, DANIEL

The USAF Test Pilot School flight control systems curriculum  
[AIAA PAPER 92-4067] p 24 A93-11253

### GLEASON, GERALD A.

Armstrong Laboratory space visual function tester program p 284 N93-28739  
Effect of microgravity on the visual near point: Visual Function Tester-Model 4 (VFT-4) p 284 N93-28742

### GLEASON, R. E.

Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030

### GLENN, FLOYD A., III

Ocular attention-sensing interface system  
[NASA-CR-190884] p 65 N93-13450

### GLICKMAN, ALBERT S.

The effect of pain on task performance: A review of the literature  
[AD-A254336] p 59 N93-15216

### GLICKMAN, RANDOLPH D.

Investigation of laser-induced retinal damage  
[AD-A264096] p 338 N93-31094

### GLINCHIKOV, V. V.

Morphological analysis of the hepatic structures in experimental animals after infrasonic exposure p 240 A93-35240

### GLOD, G. D.

Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173

Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress p 253 A93-36745

### GLUCKMAN, JONATHAN P.

Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation p 186 A93-27148

Human performance in complex task environments: A basis for the application of adaptive automation  
[AD-A255067] p 35 N93-12486

### GLUMM, MONICA M.

A study of the effects of lens focal length on remote driver performance  
[AD-A263191] p 321 N93-28941

### GMUENDER, FELIX K.

Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission) p 200 A93-32071

### GMUNDER, F. K.

Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684

### GNOEVAIA, N. K.

Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411

### GODA, T.

Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720

### GODDARD, M.

The development of an automated cell culture system for use in space life science research p 158 N93-21085

### GODDARD, NIGEL H.

The perception of articulated motion: Recognizing moving light displays  
[AD-A256046] p 59 N93-14660

### GOETERS, KLAUS-MARTIN

Computer-generated parallel tests for aptitude measurement in the selection of aviation operators  
[DLR-FB-92-29] p 343 N93-31229  
Background and objectives of the PARAT program p 343 N93-31230

The concentration loading test system: A computer generated process for acquisition of attentiveness control p 344 N93-31235

### GOFFMAN, V. R.

Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel p 359 A93-45691

### GOFORTH, H. W., JR.

Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training  
[AD-A261059] p 267 N93-26229

### GOFORTH, HAROLD W., JR.

Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALs)  
[AD-A258364] p 121 N93-18209

### GOINS, RICHARD T.

High-speed civil transport - Advanced flight deck challenges  
[AIAA PAPER 92-4231] p 28 A93-13357

### GOLDBERGER, A. L.

Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049

### GOLDEN, D. C.

Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost p 346 A93-42124

### GOLDEN, DAGIGAMUWAGE C.

Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] p 114 N93-19054

### GOLDEN, GERALD

Current training: Where are we? p 342 N93-30680

### GOLDING, J. F.

Perceptual scaling of whole-body low frequency linear oscillatory motion p 379 A93-49225

### GOLDMAN, MARVIN

Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774

### GOLDSTEIN, ROBERT

Enhanced performance using physiological feedback  
[AD-A258006] p 130 N93-17816

### GOLIGHTLY, MICHAEL J.

DoD space radiation concerns  
[AD-A253135] p 13 N93-10613

### GOLUBCHIKOVA, Z. A.

The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652  
Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208  
Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238

### GOMEZ-MARINO, M. A.

Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 N93-32253

### GONCHARENKO, A. M.

The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219

### GONZALEZ, R. R.

Biophysical model for handwear insulation testing  
[AD-A262926] p 320 N93-28884

### GOOCHEE, CHARLES F.

Response of a mouse hybridoma cell line to heat shock, agitation, and sparging p 328 A93-44928  
Intracellular proteins produced by mammalian cells in response to environmental stress p 328 A93-44929

### GOODE, PLESTEN W.

Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments p 184 A93-27032

### GOODE, R.

Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037

### GOODMAN, B. J.

Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals  
[DE93-006235] p 276 N93-28890

### GOODMAN, JERRY R.

Space Shuttle crew compartment debris-contamination  
[SAE PAPER 921345] p 305 A93-41504

### GOODWIN, T. J.

Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765

### GOONEWARDENE, I. M.

Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662

### GOPHER, DANIEL

Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements p 287 A93-40772

### GORANCHUK, V. V.

Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116  
Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine p 402 A93-55332

### GORBACHEV, V. N.

Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419

### GORDON, CHRISTOPHER J.

Measurement of behavioral thermoregulation  
[PB92-217033] p 172 N93-21046

### GORDON, CLAIRE C.

Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988  
[AD-A260869] p 265 N93-25628

Anthropometry of the foot and lower leg of U.S. Army soldiers: Fort Jackson, SC  
[AD-A261405] p 268 N93-26404

### GORDON, D. M.

Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308

### GORDON, S. L.

Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568

### GORODNITSKY, I.

A weighted iterative algorithm for neuromagnetic imaging  
[DE92-040244] p 51 N93-13522

### GORSKI, ARTHUR M.

User evaluation of a stereoscopic display for space training applications p 408 A93-53123

- GORZALCZANY, MARIAN B.**  
Fuzzy neural network methodology applied to medical diagnosis p 334 N93-29546
- GOSBEE, JOHN**  
Using GOMS models and hypertext to create representations of medical procedures for online display p 188 A93-27170  
Health maintenance facility system effectiveness testing [NASA-TM-104737] p 372 N93-32328
- GOSBEE, JOHN W.**  
Operational space human factors - Methodology for a DSO [SAE PAPER 921156] p 293 A93-41339
- GOSSELIN, LUC E.**  
Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training p 37 A93-14970
- GOTTMANN, MATTHIAS**  
Thermal control systems for low-temperature heat rejection on a lunar base [NASA-CR-191286] p 65 N93-13717
- GOULART, CARLA V.**  
The Centrifuge Facility Life Sciences Glovebox configuration study [SAE PAPER 921158] p 293 A93-41341
- GOULLARD, LUC**  
Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044
- GOURBAT, J. P.**  
Immunitization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304
- GOVINDJEE**  
Primary charge separation in isolated photosystem 2 reaction centers [DE92-041128] p 82 N93-17189
- GOVORUKHA, T. M.**  
Characteristics of the effect of inert gases on in vivo tissue respiration p 112 A93-23152  
Mechanisms of the antihypoxic effect of taurine p 325 A93-43073
- GOYAL, SANJAY K.**  
Conceptual design of a thermal control system for an inflatable lunar habitat module [NASA-CR-192014] p 140 N93-18113
- GRABOWSKI, NORMAN A.**  
Space Station Condensing Heat Exchanger biofilm formation and control evaluation [SAE PAPER 921383] p 308 A93-41541
- GRAEBER, R. C.**  
Flight crew sleep during multiple layover polar flights p 380 A93-49226
- GRAESSER, ARTHUR C.**  
Questioning mechanisms during complex learning [AD-A247382] p 26 N93-11415
- GRAHAM, G. A.**  
The clinical chemistry and immunology of long-duration space missions p 169 A93-28754
- GRAHAM, GLENNA A.**  
Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 N93-24738
- GRAHAM, W. B.**  
Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues [AIAA PAPER 93-1156] p 230 A93-31031
- GRAMS, R. R.**  
A physician's workstation designed for NASA and earth-based applications p 189 A93-28695
- GRANAAS, MICHAEL**  
Gloved operator performance study [AD-A256894] p 104 N93-16048
- GRAPPASONNI, J.**  
Vaccination against Hepatitis B: The Italian strategy p 15 N93-11289
- GRATEAU, P.**  
G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775
- GRATZNER, HOWARD**  
Measuring the metastatic potential of cancer cells p 244 N93-25566
- GRAU, J. Y.**  
Cognitive factors in the air events of the Air Force during the last decade p 134 N93-19682
- GRAVELLE, MICHAEL D.**  
CSERIAC case studies in ergonomics information analysis p 349 A93-42850
- GRAVES, SEAN**  
A distributed telerobotics system for space operations p 192 A93-29132
- GRAY, GARY W.**  
Asthma in aircrew: Assessment, treatment and disposition p 21 N93-11315
- GRBIC-GALIC, DUNIA**  
Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents [AD-A255696] p 42 N93-14557
- GREASER, MARION L.**  
Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training p 37 A93-14970
- GREEN, HOWARD J.**  
Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685
- GREEN, N. D. C.**  
The physiological limitations of man in the high G environment p 319 N93-28861
- GREEN, N. R.**  
Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570
- GREEN, RACHEL**  
Selection of a ribozyme that functions as a superior template in a self-copying reaction p 111 A93-22053
- GREEN, ROBERT P., JR.**  
The pigmentary dispersion disorder in USAF aviators p 87 A93-18033
- GREENBAUM, E.**  
Kinetic studies of interfacial photocurrents in platinized chloroplasts [DE93-002344] p 211 N93-25104
- GREENBERG, J. M.**  
Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824  
Laboratory simulation of organic grain mantles p 268 A93-36554
- GREENE, E. R.**  
Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494  
Nifedipine for treatment of high altitude pulmonary edema [AD-A256959] p 95 N93-16187
- GREENE, J. J.**  
Mechanisms of microwave induced damage in biologic materials [AD-A255799] p 42 N93-14648
- GREENISEN, M. C.**  
Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327
- GREENISEN, MICHAEL C.**  
Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition [NASA-TP-3297] p 149 N93-20319  
Two techniques for measuring locomotion impact forces during zero G [NASA-TP-3305] p 217 N93-23410
- GREENISEN, MIKE**  
Limitations to the study of man in space in the U.S. space program p 213 A93-30285
- GREENLEAF, J. E.**  
Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498  
Performance and mood-state parameters during 30-day 6 deg head-down bed rest with exercise training p 281 A93-41169  
Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 N93-12014  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133
- GREGORY, R. P.**  
Electroencephalogram epileptiform abnormalities in candidates for aircrew training p 170 A93-28757
- GREINER, THOMAS M.**  
Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988 [AD-A260869] p 265 N93-25628
- GRENSHAW, A. G.**  
Intramuscular pressure and electromyography as indexes of force during isokinetic exercise p 380 A93-49291
- GRENZOW, FRANK C.**  
X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 N93-18295
- GRETH, RICKY L.**  
Army cockpit dealthalization program p 61 A93-15419  
Goggles emergency release apparatus [AD-D015685] p 351 N93-29607
- GRIFFIN, BRAND N.**  
Smart space suits for space exploration p 28 A93-12078
- GRIFFIN, M. J.**  
Design guide for the ergonomic aspects of helicopter crew seating [ISVR-TR-209] p 65 N93-13464
- GRIFFIN, MICHAEL J.**  
Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782  
Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 N93-32237
- GRIFFITH, GUY**  
Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate [SAE PAPER 921313] p 303 A93-41475
- GRIFFITH, P.**  
Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training [AD-A261059] p 267 N93-26229
- GRIGGER, DAVID J.**  
Sabatier carbon dioxide reduction system for Space Station Freedom [SAE PAPER 921189] p 294 A93-41368
- GRIGOR'EV, A. I.**  
Principles of the organization of calcium metabolism p 7 A93-10124  
Health in space - And on Earth p 156 A93-28738  
Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypostatic hypokinesia p 170 A93-28760  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207  
Data bank establishment principles as applied to the problem of physiological norms in space medicine p 249 A93-35234  
Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401
- GRIGOREAS, C.**  
Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317
- GRIGOROVA, V.**  
The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219
- GRIGSBY, DORIS K.**  
Final results of space exposed experiment developed for students p 329 N93-29702
- GRILL, L.**  
Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- GRIMM, K.**  
Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037
- GRIMM, K. A.**  
An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137
- GRINDELAND, R. E.**  
The pituitary - Aging and spaceflown rats p 79 A93-20661
- GRINER, C. S.**  
Space Station Freedom payload operations in the 21st century p 350 A93-45436
- GRINER, T. A.**  
Specific absorption rate and radiofrequency current-to-ground in human models exposed to near-field irradiation p 360 A93-47098
- GRINIASTY, M.**  
Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962
- GRINSTEAD, RANDY S.**  
Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data [AD-A259684] p 234 N93-23660
- GRINSTEIN, GEORGES G.**  
Intelligent virtual interfaces for telerobotics p 193 A93-29136
- GRISHCHENKO, A. V.**  
Changes in the central hemodynamics under antihypostasis in humans with different blood circulation types and physical training levels p 359 A93-46967
- GROH, K. R.**  
Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 N93-16552
- GROSENBACH, MILTON J.**  
Field test of a computer-driven tool to measure psychological characteristics of aircrew [AD-A264484] p 341 N93-30425

## GROSS, ANTHONY R.

### GROSS, ANTHONY R.

Human support for Mars exploration - Issues and approaches p 27 A93-12077

### GROSSBERG, STEPHEN

The cognitive, perceptual, and neural bases of skilled performance [AD-A258236] p 130 N93-17820

### GROSZ, J.

What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment [AIAA PAPER 93-3561] p 406 A93-52661

### GROVE, C. M.

Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757

### GROVES, BERTRON M.

Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121

### GROWDON, J. H.

A balanced carbohydrate/protein diet in the management of Parkinson's disease p 153 A93-27918

### GRUBB, MONTY G.

Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles [AD-A254983] p 35 N93-12508

### GRUMSTRUP-SCOTT, JUDITH

Body composition and physical performance [AD-A255627] p 69 N93-14161

### GRUNWALD, ARTHUR J.

Visual display aid for orbital maneuvering - Design considerations p 135 A93-23518  
Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519  
Exocentric judgements in real environments and stereoscopic displays p 189 A93-27190  
Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004  
Operator-assisted planning and execution of proximity operations subject to operational constraints p 194 N93-21436  
Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

### GRUTZMACHER, W.

The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555

### GU, DINGLIANG

Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074

### GUARDIANI, FRANK

The relationship between environmental conditions and UH-60 cockpit temperature [AD-A255918] p 69 N93-14090  
Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment [AD-A258502] p 129 N93-20400  
Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment [AD-A259909] p 235 N93-23995

### GUBKINA, N. I.

The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034

### GUCCIONE, S. J., JR.

A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672

### GUCKENBERGER, DUTCH

Training high performance skills using above real-time training [NASA-CR-192616] p 225 N93-24192

### GUEDRY, F. E.

Medical evaluation of spatial disorientation mishaps p 134 N93-19703

### GUELL, A.

Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404

### GUELL, ANTONIO

Effects of acute exercise on attenuated vagal baroreflex function during bed rest p 48 A93-16160  
Balance and gait analysis after 30 days - 6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161

### GUERRA, EMMA

Silent HIV infection p 16 N93-11293

### GUERRERO, F.

T wave changes in humans and dogs during experimental dives p 92 A93-20026

### GUEZENNEC, C. Y.

Protein requirements in hypoxia or hypokinesia p 368 N93-32244

### GUEZENNEC, CHARLES Y.

Myosin and troponin changes in rat soleus muscle after hindlimb suspension p 273 A93-41124

### GUGERTY, LEO

Using GOMS models and hypertext to create representations of medical procedures for online display p 188 A93-27170

### GUIDE, PATRICK C.

An analytical study of the effects of age and experience on flight safety p 176 A93-27158

### GUIGNARD, J. C.

The accelerative stimulus for motion sickness p 410 A93-55938

### GUIGUET, M.

Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442

### GUIKEMA, J. A.

Cytokine secretion by immune cells in space p 153 A93-28694

### GUILLAUME, F.

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439

### GUIMARAES, KATIA

Architecture of autonomous systems [NASA-CR-192974] p 266 N93-26047

### GUISADO, R.

Cortical localization of cognitive function by regression of performance on event-related potentials p 9 A93-10337

### GUIZARD, C.

Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553

### GULLI, CH.

G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775

### GULLINGHAM, KENT K.

Incidence of cardiac dysrhythmias occurring during centrifuge training p 384 A93-52297

### GUNDERMAN, RONALD G.

Helmet-mounted systems test and evaluation process p 227 A93-30053

### GUNGA, HANS C.

Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495

### GUPTA, ASHOK

Ultraviolet disinfection technology assessment [PB92-222868] p 64 N93-12983

### GUPTA, PRAHLAD

Connectionist models and linguistic theory: Investigations of stress systems in language [AD-A265450] p 364 N93-32064

### GUREVICH, S. M.

Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

### GUSTAVINO, S.

Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357] p 307 A93-41516

### GUTIERREZ, DAVID J.

An analysis of human performance in simulated partial-gravity environments p 347 A93-42173

### GUTKOWSKA, J.

Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561

### GUY, HAROLD J. B.

Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity p 386 A93-52617

## H

### HAAKANSSON, S.

Plasmid encoded virulence of *Yersinia* [FOA-B-40419-4.4] p 275 N93-28199

### HAAS, CHARLES N.

Development of novel models for describing multiple toxicity effects [AD-A264439] p 336 N93-30422

### HAAS, G.

Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687

### HABERCOM, MARK

Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate [SAE PAPER 921313] p 303 A93-41475

### HACKETT, PETER

Cerebral blood flow - Comparison of ground-based and spaceflight data and correlation with space adaptation syndrome p 87 A93-17553

### HACKETT, PETER H.

Nifedipine for treatment of high altitude pulmonary edema [AD-A256959] p 95 N93-16187

### HADDAD, ALBERT G., SR.

Emergence of telerobotic control enhancement from research in machine autonomy p 183 A93-27028

### HADDAD, S. G.

Challenges of space medical operations and life sciences management p 155 A93-28716

### HAEDER, DONAT-P.

Swimming behavior of the unicellular flagellate, *Euglena gracilis*, in simulated and real microgravity p 151 A93-26549

### HAFELE, BERNARD

Development of the carbon dioxide removal system blower used on Space Station Freedom [SAE PAPER 921188] p 294 A93-41367

### HAHLER, BETH

CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180

### HAHN, EDWARD

Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377

### HAHN, THEODORE J.

Cellular immunosenescence - An overview p 80 A93-20663

### HAIDAR, R.

Occupant kinematics simulation of the Kegworth air accident p 142 N93-19662

### HAJARE, ANKUR R.

Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188

### HALBERG, E.

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439

### HALBERG, F.

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439

### HALBERG, F. E.

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439

### HALE, JOSEPH P.

Man-systems integration and the man-machine interface p 313 N93-27795

### HALEY, PATRICK J.

Beryllium toxicity - An update p 104 A93-20779

### HALGREN, SHANNON

Using GOMS models and hypertext to create representations of medical procedures for online display p 188 A93-27170

### HALL, ALAN J.

Mineral theories of the origin of life and an iron sulfide example p 74 A93-18009

### HALL, C. R.

Environmental monitoring and research at the John F. Kennedy Space Center p 154 A93-28714

### HALL, E. J.

Radiation physics, biophysics, and radiation biology [DE92-013673] p 6 N93-12266

### HALL, J. R.

The design and development of the new RAF standard HUD format p 318 N93-28856

### HALL, JOHN B., JR.

The environmental control and life-support system for a lunar base: What drives its design p 66 N93-13991

### HALL, JOSEPH W.

Auditory spectro-temporal pattern analysis [AD-A264691] p 361 N93-31981

### HALL, LAWRENCE O.

A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267

### HALL, PRESTON S.

Helmet-mounted systems technology planning for the future p 227 A93-30052

### HALSTEAD, THORA W.

Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report p 375 A93-49206

### HALTERMAN, KAREN

Safety issues of manipulator systems under computer control p 192 A93-29121

### HAMALAINEN, OLAVI

Flight helmet weight, +Gz forces, and neck muscle strain p 136 A93-24046

Determinants of +Gz-related neck pain - A preliminary survey p 380 A93-49227

Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high +Gz forces p 384 A93-52298

- HAMAMI, HIDEAKI**  
A trade study method for determining the design parameter of CELSS subsystems  
[SAE PAPER 921198] p 295 A93-41374
- HAMANO, NOBUO**  
Experimental and theoretical study on membrane distillation using thermopervaporation  
[SAE PAPER 921397] p 309 A93-41554
- HAMBRIGHT, R. N.**  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization  
p 208 N93-23070
- HAMILTON, DAVID B.**  
Operator workload predictions for the revised AH-64A workload prediction model, volume 1  
[AD-A254198] p 30 N93-10261  
Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles  
[AD-A254983] p 35 N93-12508  
Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H  
[AD-A254939] p 63 N93-12545  
The effects of superimposing symbology on a simulated night vision goggle display  
[AD-A263458] p 354 N93-30590
- HAMILTON, K.**  
Subjective and behavioral effects associated with repeated exposure to narcosis p 7 A93-10327
- HAMM, P. B.**  
Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783
- HAMMER, JOHN M.**  
Modeling the dynamics of mental workload and human performance in complex systems  
[AD-A258553] p 135 N93-19956
- HAMMON, COLIN P.**  
Relating flying hours to aircrew performance: Evidence for attack and transport missions  
[AD-A253988] p 25 N93-10719
- HAMMOND, MICHAEL**  
Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332
- HAMSTRA, S. J.**  
Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size  
p 224 A93-32788
- HANCHIN, F.**  
Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups  
p 78 A93-20030
- HANEY, L. N.**  
Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA  
[DE93-001923] p 321 N93-28942
- HANNON, PATRICK R.**  
Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses  
[AD-A254129] p 13 N93-10661
- HANSEN, JESPER M.**  
Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects  
p 93 A93-20035  
Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans  
p 332 A93-44180
- HANSMAN, R. J.**  
Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377
- HANSMAN, R. J., JR.**  
An exploratory study of plan-view terrain displays for air carrier operations p 289 A93-39573
- HANSSON, P. A.**  
To the stars with the cytoskeleton? p 1 A93-11198
- HAO, WEI-WEI**  
Effect of acute hypoxia exposures on plasma endothelin in rats p 199 A93-30442
- HAQUE, A.**  
Bioregenerative life support as self-sustaining ecosystem in space p 231 A93-32073
- HARA, HIDEKI**  
Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water  
p 94 A93-20898
- HARADA, KAZUO**  
In vitro selection of optimal DNA substrates for T4 RNA ligase p 329 A93-44939  
Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection p 397 A93-52878
- HARDMAN, P.**  
Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy p 155 A93-28725
- Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands p 156 A93-28746
- HARDY, ALVA C.**  
Radiological assessment for Space Station Freedom [NASA-TM-104758] p 128 N93-20303
- HARGENS, A. R.**  
Direct measurement of capillary blood pressure in the human lip p 279 A93-40550  
Intramuscular pressure and electromyography as indexes of force during isokinetic exercise  
p 380 A93-49291  
Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295
- HARGENS, ALAN R.**  
Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968  
Transcapillary fluid responses to lower body negative pressure p 380 A93-49292
- HARM, DEBORAH L.**  
Changes in the dark focus of accommodation associated with simulator sickness p 379 A93-49222  
Mental rotation - A key to mitigation of motion sickness in the virtual environments? p 387 A93-49404  
Physiology of motion sickness symptoms p 403 A93-55939
- HARMA, M.**  
The prediction of the adaptation of circadian rhythms to rapid time zone changes p 278 A93-39714
- HARPER, ELVIN**  
Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy  
[AD-A262483] p 285 A93-28759
- HARPER, LYNN**  
Exobiology: The NASA program p 114 N93-18561
- HARPER, LYNN D.**  
Human support for Mars exploration - Issues and approaches p 27 A93-12077
- HARRIS, B. A.**  
Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327
- HARRIS, DON**  
The effect of low blood alcohol levels on pilot performance in a series of simulated approach and landing trials p 179 A93-27453
- HARRIS, JEFFREY**  
Dust protection for environmental control and life support systems in the lunar environment p 315 N93-27979
- HARRIS, JOHN C.**  
Automatic detection of seizures with applications p 254 N93-25592
- HARRIS, REGINA M.**  
Age 60 Project: Consolidated database experiments [HS-TR-8025-3C(R2)] p 314 N93-27851
- HARRIS, ROBERT T.**  
Mapping of electrical muscle stimulation using MRI p 279 A93-40549
- HART, JOAN M.**  
Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing  
[SAE PAPER 921299] p 303 A93-41464
- HARTMAN, HYMAN**  
Carbonaceous chondrites and the origin of life p 412 A93-55997
- HARTSOCK, DAVID C.**  
Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice p 186 A93-27145  
3-D target designation using two control devices and an aiding technique p 408 A93-53120
- HARTUNG, G. H.**  
Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and nonfit men  
p 385 A93-52304
- HARWOOD, CAROLINE S.**  
Molecular biology of anaerobic aromatic biodegradation [AD-A255213] p 42 N93-13863
- HASEGAWA, PAUL M.**  
Biomass productivity and sustainability of a bioregenerative life-support system  
[SAE PAPER 921359] p 307 A93-41518
- HASEGAWA, S.**  
Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711
- HASKELL, IAN**  
S-R compatibility effects with orthogonal stimulus and response dimensions p 179 A93-27194
- HASSOUN, JOHN A.**  
KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713  
Attitude awareness enhancements for the F-16 head-up display  
[AD-A260280] p 236 N93-24168
- HATFALUDY, S.**  
Mechanically induced alterations in cultured skeletal muscle growth p 202 A93-32749
- HATHER, B. M.**  
Skeletal muscle responses to unloading with special reference to man p 166 A93-28718
- HAUGSET, KJELL**  
Man-machine interface issues for space nuclear power systems p 60 A93-13907
- HAULE, D. D.**  
Teleprogramming a cooperative space robotic workcell for Space Station p 190 A93-29109
- HAUSDORFF, J. M.**  
Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049
- HAUSER, GERHARD**  
Hermes ECLSS - Main requirements and technical solutions  
[SAE PAPER 921400] p 309 A93-41555
- HAUSER, U. E.**  
Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms  
[AD-A259803] p 217 N93-23459
- HAVLIN, S.**  
Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049
- HAWES, PHILIP B.**  
Life systems for a lunar base p 66 N93-13992
- HAWORTH, LORAN A.**  
Helmet Mounted Display symbology integration research p 263 A93-35914
- HAYAMIZU, SAYOKO**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men  
p 92 A93-20029
- HAYASHI, HIROMU**  
On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791
- HAYASHI, YOSHITAKA**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men  
p 92 A93-20029
- HAYATI, SAMAD**  
An operator interface design for a telerobotic inspection system  
[AIAA PAPER 93-1160] p 231 A93-31034  
Remote surface inspection system p 410 A93-55469
- HAYES, BENITA C.**  
Bright light delivery system  
[NASA-CASE-MFS-28723-1] p 96 N93-17058
- HAYES, DANIEL**  
Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933
- HAYES, J. C.**  
Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327
- HAYES, JUDITH C.**  
Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition  
[NASA-TP-3297] p 149 N93-20319
- HE, DENGYAN**  
Human factors in design of military aircrafts' oxygen supply equipment p 60 A93-14222
- HE, H. S.**  
The dynamic mathematical model and digital simulation of the environmental control system p 61 A93-14319
- HE, X. M.**  
Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type p 153 A93-28698
- HE, XIAO M.**  
Atomic structure and chemistry of human serum albumin p 200 A93-31628  
Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 A93-32850
- HEAD, A. T.**  
Multi-function visor p 146 N93-19770
- HEATHCOTE, DAVID G.**  
Investigation of wheat coleoptile response to phototropic stimulations  
[NASA-CR-192157] p 114 N93-18608  
A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES)  
[NASA-CR-192219] p 114 N93-19377
- HECHT, H.**  
Influence of animation on dynamical judgments p 180 A93-28692
- HECHT, HEIKO**  
Influence of animation on dynamical judgments p 98 A93-20275

## HEEGER, D. J.

### HEEGER, D. J.

- Normalization of cell responses in cat striate cortex  
p 154 A93-28700
- Half-squaring in responses of cat striate cells  
p 157 A93-28748

### HEEMSKERK, C. J. M.

- HERA - A reliable and safe space robot  
p 263 A93-35571

### HEER, M.

- Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man  
p 163 A93-28685
- The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading  
p 163 A93-28686
- Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT  
p 163 A93-28688

### HEGER, A. S.

- Treatment of human-computer interface in a decision support system  
[DE93-002281] p 237 N93-24502

### HEGERL, REINER

- Structure of a molecular chaperone from a thermophilic archaeobacterium  
p 151 A93-25821

### HEIDMANN, JEAN

- SETI in Europe  
p 237 N93-23908

### HEILMAN, CRAIG A.

- X Ray System, Lightweight Medical (XRSLM)  
[AD-A258159] p 123 N93-18295

### HEISING, SILKE

- Ferrous iron oxidation by anoxygenic phototrophic bacteria  
p 271 A93-39280

### HEITMEYER, CONSTANCE L.

- Direct manipulation and intermittent automation in advanced cockpits  
[AD-A253814] p 32 N93-11784

### HEJNOWICZ, ZYGMUNT

- How well does the clinostat mimic the effect of microgravity on plant cells and organs?  
p 376 A93-49213

### HELDMANN, MICHAEL J.

- Space Station Water Processor - Current flight design  
[SAE PAPER 921112] p 289 A93-41306

### HELEN, C.

- Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission  
p 247 A93-35207

### HELLE, C.

- Changes in food and energy intake in military aircrew  
p 368 A93-32246

### HELLER, LEON F.

- Helmet slippage during visual tracking - The effect of voluntary head movements  
p 389 A93-49223

### HELLMUTH, H.

- Equipment, more or less ready to be used in helicopters  
p 148 N93-19785

### HELTON, K. T.

- The unique contribution of selected personality tests to the prediction of success in naval pilot training  
[AD-A258144] p 132 N93-18291

### HELTON, KATHLEEN T.

- The five-factor personality model and naval aviation candidates  
[AD-A260227] p 225 N93-24319

### HEMMERSBACH-KRAUSE, RUTH

- Swimming behavior of the unicellular flagellate, *Euglena gracilis*, in simulated and real microgravity  
p 151 A93-26549

### HENDERSON, A. S.

- Gene transcription and electromagnetic fields  
[DE93-010854] p 276 N93-28848

### HENDRIX, C. W.

- Early markers of HIV infection and subclinical disease progression  
p 17 N93-11296

### HENDRIX, CRAIG W.

- Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force  
p 16 N93-11292

### HENLEY, C.

- Salivary total protein and experimental Coriolis sickness  
p 383 A93-49573

### HENNET, REMY J.-C.

- Hydrothermal systems - Their varieties, dynamics, and suitability for prebiotic chemistry  
p 73 A93-18002
- Future research  
p 74 A93-18010

### HENNINGER, D. L.

- Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost  
p 346 A93-42124

### HENNINGER, DONALD H.

- An assessment of waste processing/resource recovery technologies for lunar/Mars life applications  
[SAE PAPER 921271] p 300 A93-41441

### HENNINGER, DONALD L.

- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] p 114 N93-19054

### HENNION, P. Y.

- An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle  
p 170 A93-28758

### HENRIKSEN, ERIK J.

- Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats  
p 326 A93-44179

### HER, MING-GUO

- Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle  
p 399 A93-55458
- Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier  
p 65 N93-13486

### HERBERT, FRANK J.

- Space biology initiative program definition review. Trade study 4: Design modularity and commonality  
p 208 N93-23071
- Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost  
p 208 N93-23080

### HERMIDA, J. S.

- Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses  
p 278 A93-39716

### HERNANDEZ, O.

- A linear, time-varying simulation of the respiratory tract system  
[DE93-004515] p 218 N93-24009

### HERNING, R. I.

- The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB  
[AD-A254840] p 27 N93-12432

### HERRICK, ROBERT E.

- Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs  
p 326 A93-44183
- Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression  
p 327 A93-44184

### HERRMANN, CAL C.

- High-recovery low-pressure reverse osmosis  
[SAE PAPER 921353] p 306 A93-41512

### HERRY, JEAN P.

- Energy expenditure climbing Mt. Everest  
p 92 A93-20031

### HERTEN, M.

- Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 N93-24382

### HERTZOG, CHRISTOPHER K.

- Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks  
[AD-A257711] p 100 N93-17684

### HESLEGRAVE, R.

- Subjective and behavioral effects associated with repeated exposure to narcosis  
p 7 A93-10327

### HESLEGRAVE, RONALD J.

- Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011

### HESS, C.

- Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space  
p 184 A93-27037

### HESS, ELIZABETH

- Publications of the Space Physiology and Countermeasures Program, Neuroscience Discipline: 1980-1990  
[NASA-CR-4476] p 55 N93-15583

### HESS, JOHN R.

- Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990  
[NASA-CR-4475] p 123 N93-18376

### HESS, JOHN R.

- Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin  
[AD-A258185] p 120 N93-17900

### HESS, R. A.

- Incorporating display limitations in a model-based analysis of flight simulator fidelity  
[AIAA PAPER 93-0859] p 137 A93-24923

### HETTINGER, LAWRENCE J.

- Changes in the dark focus of accommodation associated with simulator sickness  
p 379 A93-49222
- Profile analysis of simulator sickness symptoms - Application to virtual environment systems  
p 381 A93-49399

### HETTINGER, LAWRENCE J.

- Virtually induced motion sickness in virtual environments  
p 381 A93-49401
- Simulator sickness  
p 403 A93-55944
- Motion and human performance  
p 406 A93-55949

## PERSONAL AUTHOR INDEX

### HETZER, MARTIN

- Group II intron RNA catalysis of progressive nucleotide insertion - A model for RNA editing  
p 398 A93-55292

### HEWGILL, L.

- An experiment in vision based autonomous grasping within a reduced gravity environment  
p 193 A93-29137

### HEWITT, DENNIS R.

- Characteristics and requirements of robotic manipulators for space operations  
p 182 A93-27003

### HEWITT, TIGER

- Factors that affect depth perception in stereoscopic displays  
p 230 A93-30455

### HEYING, MONTY

- Development of membrane gas removal technology for microgravity liquid flow systems  
[SAE PAPER 921162] p 294 A93-41344

### HEZEL, PAUL J.

- Head mounted displays for virtual reality  
[AD-A263498] p 322 N93-29340

### HICKS, MARK

- Aircrew acceptance of automation in the cockpit  
p 144 A93-30455

### HIGHTOWER, T. M.

- Recycling and source reduction for long duration space habitation  
[SAE PAPER 921121] p 290 A93-41313

- Water reclamation technology development for future long range missions  
[SAE PAPER 921351] p 306 A93-41510

### HIAZI, YOUSEF

- Prefabricated foldable lunar base modular systems for habitats, offices, and laboratories  
p 106 N93-17444

### HILAND, D. A.

- Success rate analysis of Navy SERGRAD Flight Training  
p 56 A93-16152

### HILBURN, BRIAN

- Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts  
[AD-A254381] p 64 N93-12860

### HILDEBRAND, F.

- Development and implementation of the MotoMir experiment on the Mir Space Station  
p 220 N93-24363

### HILDEBRANDT, WULF

- Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress  
p 401 A93-55165

### HILL, R. D.

- An efficient lightning energy source on the early earth  
p 73 A93-17823

### HILL, SUSAN G.

- Application and validation of workload assessment techniques  
[AD-A264575] p 366 N93-32012

### HILL, TIM

- Intelligent fault management for the Space Station active thermal control system  
p 32 N93-11930

### HILLBRECHT, A.

- Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest  
p 162 A93-28682

- Cardiopulmonary function during 10 days of head-down tilt bedrest  
p 162 A93-28683

### HILLE, HARALD K.

- Measurement and evaluation of blast overpressure during F-15A crew station vulnerability assessment test  
[AD-A257152] p 104 N93-16033

### HILLEBRECHT, A.

- Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest  
p 162 A93-28681

- The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading  
p 163 A93-28686

### HILLMAN, D. C.

- Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory  
p 48 A93-17439

### HILLMAN, DONALD J.

- Age 60 Project: Consolidated database experiments  
[HS-TR-8025-3C(R2)] p 314 N93-27851

### HILPERT, REINHOLD

- Biochemically active layers for selective material detection sensors  
[MBB-Z-0440-92-PUB] p 158 N93-20959

### HINGHOFFER-SZALKAY, H.

- Effect of head-down bedrest on blood/plasma density after intravenous fluid load  
p 163 A93-28687

- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise  
[NASA-TM-103942] p 255 N93-26133

### HINKLE, C. R.

- Environmental monitoring and research at the John F. Kennedy Space Center  
p 154 A93-28714



- HINMAN, ELAINE**  
Physical and digital simulations for IVA robotics  
p 391 A93-49445
- HINMAN, ELAINE M.**  
Microgravity flight testing of a laboratory robot  
[AAS PAPER 91-035] p 62 A93-15583  
Development of a test protocol for evaluating EVA glove performance  
[SAE PAPER 921254] p 298 A93-41424
- HINSDALE, LLOYD**  
The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality  
[SAE PAPER 921266] p 300 A93-41436
- HIRAI, ATSUGO**  
Effect of food intake on skin vasomotor responses to head-up tilt in humans  
p 379 A93-49180
- HIRAYAMA, M.**  
Research and development of sensing and manipulation techniques for space robotics on a testbed  
[AIAA PAPER 93-0794] p 136 A93-24873
- HIROSE, MICHITAKA**  
Human behavior in virtual environments  
p 233 A93-33447
- HIROTA, KOUICHI**  
Human behavior in virtual environments  
p 233 A93-33447
- HIRSCH, EDWARD**  
The effects of an antijet lag diet  
p 370 A93-32263
- HITCHCOCK, EDWARD**  
Reclined seating in advanced crewstations - Human performance considerations  
p 186 A93-27151
- HITCHENS, G. D.**  
Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process  
[SAE PAPER 921234] p 297 A93-41408  
Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process  
[SAE PAPER 921275] p 301 A93-41444
- HJELDE, ASTRID**  
Variability over time of complement activation induced by air bubbles in human and rabbit sera  
p 323 A93-42190
- HOBBS, JERRY R.**  
Interpretation as abduction  
[AD-A259608] p 225 A93-24227
- HOCHHELLA, MICHAEL F., JR.**  
Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces  
p 411 A93-53286
- HOCHSTEIN, LAWRENCE I.**  
Purification and properties of an ATPase from *Sulfolobus solfataricus*  
p 201 A93-32115  
Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from *Halobacterium saccharovororum*  
p 201 A93-32116  
Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits  
p 243 A93-36557
- HODGE, KEVIN A.**  
Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks  
[AD-A257711] p 100 A93-17684
- HODGES, THOMAS K.**  
Biomass productivity and sustainability of a bioregenerative life-support system  
[SAE PAPER 921359] p 307 A93-41518
- HOEHN, A.**  
Design and evaluation of a payload to support plant growth onboard COMET 1  
[SAE PAPER 921389] p 308 A93-41547
- HOETGER, DEBORA**  
SHARC: Space Habitat, Assembly and Repair Center  
[NASA-CR-192031] p 140 A93-18153
- HOFFACRE, K. C.**  
Evaluation and optimization of a flexible filtration system for respiratory protection system 21  
[AD-A262467] p 284 A93-28758
- HOFF, WILLIAM**  
Accuracy of locating circular features using machine vision  
p 182 A93-27022
- HOFFLER, G. W.**  
Cardiovascular physiology - Effects of microgravity  
p 166 A93-28719
- HOFFMANN, ANGELIKA**  
Structure of a molecular chaperone from a thermophilic archaeobacterium  
p 151 A93-25821
- HOFFMEISTER, STEPHEN**  
Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude  
p 326 A93-44181
- HOGAN, MICHAEL C.**  
Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally  
p 111 A93-21684
- HOKARI, MASAOMI**  
Mortality experience of cockpit crewmembers from Japan Airlines  
p 385 A93-52306
- HOLDEN, TINA**  
The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAN)  
p 258 A93-25595
- HOLDER, DONALD W., JR.**  
Phase III Integrated Water Recovery Testing at MSFC - Closed hygiene and potable loop test results and lesson learned  
[SAE PAPER 921117] p 290 A93-41309
- HOLLAND, A. W.**  
Results of a structured psychiatric interview to evaluate NASA astronaut candidates  
p 223 A93-32780
- HOLLAND, ALBERT W.**  
Multicultural factors in the space environment - Results of an international shuttle crew debrief  
p 222 A93-30277
- HOLLAND, PETER J.**  
Recovering potable water from wastewater in space platforms by lyophilization  
[SAE PAPER 921323] p 304 A93-41485  
Extraction of potable water from urine for space applications  
p 345 A93-42121
- HOLLARS, MICHAEL G.**  
Space telerobotic research and applications at Space Systems/Loral  
[AAS PAPER 91-046] p 62 A93-15588
- HOLLEVOET, FERNAND**  
The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft  
p 146 A93-19772
- HOLLEY, PETER J.**  
Cognitive predictors of vigilance  
p 287 A93-40771
- HOLLMANN, W.**  
Effects of simulated microgravity (HDT) on blood fluidity  
p 44 A93-14972
- HOLLOWAY, H. C.**  
Crew factors  
p 57 A93-17431
- HOLLOWAY, HARRY C.**  
Supporting human exploration in space - Biomedical research  
p 48 A93-17428  
Remote medical systems for the human exploration of space  
[AAS PAPER 91-321] p 401 A93-54309
- HOLLY, F. F.**  
System for generating dynamic video imagery for human factors research  
[AD-A248675] p 31 A93-11743
- HOLM, NILS G.**  
Why are hydrothermal systems proposed as plausible environments for the origin of life?  
p 73 A93-18001  
Hydrothermal systems - Their varieties, dynamics, and suitability for prebiotic chemistry  
p 73 A93-18002  
Future research  
p 74 A93-18010  
The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs  
p 325 A93-43795
- HOLT, ROBERT W.**  
Behavioral validation of a hazardous thought pattern instrument  
p 176 A93-27142
- HOLY, X.**  
Functional adaptation of different rat skeletal muscles to weightlessness  
p 377 A93-49575
- HOLZMUELLER, G.**  
Eye-head-arm coordination and spinal reflexes in weightlessness  
p 236 A93-24362
- HONDA, HAJIME**  
Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu  
p 354 A93-43793
- HOOKER, A. M.**  
Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate  
p 19 A93-11306
- HOOVER, MARK D.**  
Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission  
p 43 A93-13774  
Beryllium toxicity - An update  
p 104 A93-20779
- HOPE, ARVID**  
Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones  
p 251 A93-35495
- HOPKINS, D. A.**  
Optimal design of composite hip implants using NASA technology  
p 174 A93-22188
- HOPKINS, WILLIAM D.**  
Behavioral asymmetries of psychomotor performance in rhesus monkeys (*Macaca mulatta*) - A dissociation between hand preference and skill  
p 339 A93-44923
- HOPPER, DARREL G.**  
Panoramic cockpit displays  
p 145 A93-19765
- HOPPER, PHILLIP L.**  
Measuring hearing protection device performance using the metronics db-3100 sound level analyzer (dosimeter)  
[AD-A260852] p 265 A93-25787
- HOPSON, MARGARET**  
Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses  
[AD-A254129] p 13 A93-10661
- HORDINSKY, JERRY R.**  
The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident  
[AD-A254550] p 49 A93-12612
- HORIE, MICHHIKO**  
Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover  
p 316 A93-28032
- HORIGOME, SHINICHI**  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova  
p 375 A93-49179
- HORII, A.**  
Neuropharmacology of motion sickness and emesis - A review  
p 271 A93-39711  
Motion sickness induced by sinusoidal linear acceleration in rats  
p 272 A93-39712
- HORIUCHI, JOUJI**  
Effects of head down tilt on hepatic circulation and metabolism in conscious dogs  
p 80 A93-20899
- HORLITZ, KRISTA L.**  
Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures  
p 405 A93-55348
- HORNECK, G.**  
Life in and from space  
p 237 A93-24373
- HORNECK, GERDA**  
Water in the solar system and its role in exobiology; Proceedings of the European Geophysical Society General Assembly, 26th, Wiesbaden, Germany, Apr. 22-26, 1991  
p 268 A93-36551  
Responses of *Bacillus subtilis* spores to space environment - Results from experiments in space  
p 268 A93-36556
- HORNUNG, R. W.**  
Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers  
p 168 A93-28739
- HOROWITZ, PAUL**  
Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-191618] p 110 A93-15825  
Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-191807] p 110 A93-16709  
Wide-bandwidth high-resolution search for extraterrestrial intelligence  
[NASA-CR-193137] p 322 A93-28895
- HOROWITZ, STANLEY A.**  
Relating flying hours to aircrew performance: Evidence for attack and transport missions  
[AD-A253988] p 25 A93-10719
- HORVITZ, ERIC**  
A decision-theoretic approach to the display of information for time-critical decisions: The Vista project  
p 367 A93-32152
- HOSHI, SEIKO**  
Lunar surface experiment system  
p 316 A93-28034
- HOSHI, T.**  
Changes in vitamin A status following prolonged immobilization (simulated weightlessness)  
p 166 A93-28720  
Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity  
p 168 A93-28736
- HOSMAN, RUUD J. A. W.**  
False cue detection thresholds in flight simulation  
[AIAA PAPER 93-3578] p 407 A93-52674
- HOUCK, MICHAEL R.**  
A cognitive classification of pilot performance in air combat  
p 347 A93-42814
- HOUDAS, YVON**  
Intracardiac hemodynamics in man during short periods of head-down and head-up tilt  
p 117 A93-24044
- HOUSTON, C. S.**  
Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes  
p 383 A93-49574
- HOUSTON, CHARLES S.**  
Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion  
p 115 A93-21685  
Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude  
p 117 A93-24043

## HOUTCHENS, B. A.

### HOUTCHENS, B. A.

- Management of trauma and emergency surgery in space p 167 A93-28734  
Medical-care systems for long-duration space missions p 169 A93-28755

### HOWARD, EMILY

- Virtual interface applications for airborne weapons systems p 318 A93-28858  
Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 A93-28870

### HOWARD, GLENN W., JR.

- The application of filtration technology within the Water Processor on board Space Station Freedom [SAE PAPER 921270] p 300 A93-41440

### HOWARD, I.

- Aimed arm movements under changed gravity p 193 A93-21113

### HOWARD, IAN P.

- Accuracy of aimed arm movements in changed gravity p 56 A93-16159

### HOWARD, RUSSELL D.

- Neutral buoyancy simulation of space telerobotics operations p 185 A93-27038

### HOWE, ROBERT D.

- A force-reflecting teleoperated hand system for the study of tactile sensing in precision manipulation p 263 A93-35536

### HOWELL, LAWRENCE D., JR.

- CSERIAC case studies in ergonomics information analysis p 349 A93-42850

### HOWLETT, ERIC M.

- High-resolution inserts in wide-angle head-mounted stereoscopic displays p 408 A93-53121

### HOY, DENNIS M.

- Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements [SAE PAPER 921347] p 305 A93-41506

### HU, FENGMING

- Model building, algorithm and simulation of the pressure control system of a cabin p 29 A93-13534

### HU, MAOQI

- Subtraction of 50 Hz interference from electrocardiogram by using cycle averaging method p 11 A93-13714

### HUANG, E. P.

- Colour is what the eye sees best p 159 A93-26245

### HUANG, HUA-MING

- A physiological signal acquisition and processing system for bed-rest laboratory p 103 A93-19998

### HUANG, SHAO YUNG

- Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120

### HUANG, Y.

- Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

### HUBBARD, DAVID C.

- Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 A93-17857

- Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight [AD-A264661] p 341 A93-30542

### HUBBELL, D. H.

- Lunar base CELSS: A bioregenerative approach p 67 A93-13993

### HUBER, GERTRUD

- Life in hot springs and hydrothermal vents p 243 A93-36559

### HUBERMAN, E.

- Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation [DE92-041134] p 96 A93-16552

### HUCK, RONALD P.

- Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21) [AD-A253394] p 30 A93-10288

### HUDSON, PAUL

- Smart space suits for space exploration p 28 A93-12078

### HUDSON, ROBERT

- Training for avionics evaluation [AIAA PAPER 92-4068] p 24 A93-11254

### HUEBNER-MOTHS, JANIS

- Lunar base requirements for human habitability p 345 A93-41995

- Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 A93-18156

### HUEBNER, W. F.

- Comets as a possible source of prebiotic molecules p 109 A93-17979

### HUFF, JAIMI

- Design of a radiator shade for testing in a simulated lunar environment [NASA-CR-192080] p 108 A93-17710

### HUFF, T. L.

- Aquatic biofilms and their responses to disinfection and invading species [SAE PAPER 921211] p 296 A93-41387

### HUFF, TIM

- Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols [NASA-CR-192570] p 359 A93-32354

### HUFF, TIMOTHY L.

- Microbiological and corrosion analysis of three urine pretreatment regimes with titanium 6A1-4V [NASA-CR-192575] p 372 A93-32356

### HUFF, WINSTON

- Space Station and lunar/Mars life support research p 346 A93-42122

### HUFFINE, EDWIN F.

- Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis [AD-A255582] p 95 A93-16041

### HUFFMAN, SCOTT B.

- Dimensions of complexity in learning from interactive instruction p 191 A93-29111

### HUGHES-FULFORD, M.

- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728

### HUGHES-FULFORD, MILLIE

- Altered cell function in microgravity p 79 A93-20660

### HUGHES, EDWARD

- An evaluation of miniaturized aircraft keyboards p 348 A93-42844

### HUGHES, EDWARD B.

- Testing a subjective metric of situation awareness p 178 A93-27183

### HUGHSON, R. L.

- Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404

### HULL, D. H.

- Blood lipids in aircrew recruits and in RAF aviators p 362 A93-32251

### HULS, M. H.

- Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472

### HUMBERT, P.

- Health services at the Kennedy Space Center p 154 A93-28711

### HUNTER, N.

- Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710

### HUNTINGTON, JUDITH L.

- Exobiology in Solar System Exploration [NASA-SP-512] p 112 A93-18545

### HUNTLEY, M. S., JR.

- Instrument-approach-plate design considerations for displaying radio frequencies p 289 A93-39574

### HUNTOON, CAROLYN L.

- Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545

### HURST, CHARLES

- Contaminant distribution and accumulation in water recycle systems [SAE PAPER 921360] p 307 A93-41519

- Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521

### HURT, H.

- Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302

### HUSTVEDT, B. E.

- Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 A93-32243

### HUTTENBACH, ROBIN C.

- Life Support and Habitability Manual ESA PSS-03-406 [SAE PAPER 921338] p 305 A93-41497

### HWANG, VINCENT

- Virtual display aids for teleoperation p 183 A93-27029

### HYDE, T. M.

- Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743

### HYLAND, DIANE T.

- Age 60 Project: Consolidated database experiments [HS-TR-8025-3C(R2)] p 314 A93-27851

### HYMER, W. C.

- The pituitary - Aging and spaceflight rats p 79 A93-20661

- Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933

- Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934

- Heterogeneity of rat pituitary prolactin cells - Relationships among location, hormone assay and estrous cycle stage p 358 A93-46606

- Commercial opportunities in bioseparations and physiological testing aboard Space Station Freedom p 206 A93-22649

### HYMER, WESLEY C.

- Electrophoretic separation of cells and particles from rat pituitary and rat spleen [NASA-CR-193073] p 276 A93-28415

### HYPES, WARREN D.

- The environmental control and life-support system for a lunar base: What drives its design p 66 A93-13991

## I

### IANDOLO, J. J.

- Effects of antihistostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693

### IANOVS'KII, M. B.

- Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670

### IAROTSKII, A. I.

- Physical fitness as a criterion of readiness for spaceflights p 98 A93-18412

### IASNETSOV, V. V.

- Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness p 239 A93-35211

- Central neurophysiological and neurochemical vomiting mechanisms (Review of the literature) p 240 A93-35232

### IAVECCHIA, HELENE P.

- Ocular attention-sensing interface system [NASA-CR-190884] p 65 A93-13450

### ICHIKAWA, MASUMI

- Effects of visually induced self-motion perception (vection) on upright standing posture p 214 A93-31531

### IDDINGS, E.

- A physician's workstation designed for NASA and earth-based applications p 189 A93-28695

### IDESAWA, MASANORI

- Two types of occlusion cues for the perception of 3-D illusory objects in binocular fusion p 222 A93-30239

### IDLE, DUNNING, V

- TALON and CRADLE: Systems for the rescue of tumbling spacecraft and astronauts p 196 A93-22268

### IGARASHI, M.

- Salivary total protein and experimental Coriolis sickness p 383 A93-49573

### IGARASHI, MAKOTO

- Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547

- Role of the vestibular end organs in experimental motion sickness - A primate model p 399 A93-55933

### IDA-KLEIN, AKIKO

- Cellular immunosenescence - An overview p 80 A93-20663

### IJYAMA, S.

- Development of the nitrogen fixation system for CELSS [SAE PAPER 921238] p 297 A93-41411

### KEHARA, CURTIS

- A low cost helmet-mounted camera/display system for field testing teleoperator tasks p 408 A93-53122

### IL'NITSKAIA, M. A.

- Psychophysiological studies of acute hypoxic hypoxia p 91 A93-18417

### ILLAUER, DIETER

- Future military pilot training - A perspective of industry [AIAA PAPER 93-3601] p 404 A93-52689

### IMAI, AKIRA

- Cognitive performance and event-related brain potentials under simulated high altitudes p 331 A93-42189

### IMAI, EIICHI

- Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793

### IMBERT, GUY

- Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 A93-30882

- INAGAKI, T.**  
Organic models of interstellar grains p 35 A93-11847
- INAMURA, KINSAKU**  
Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328
- INCE, ILHAN**  
Operator vision aids for telerobotic assembly and servicing in space p 262 A93-35530  
Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981
- INMAN, VAUGHAN W.**  
Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements [AD-A262872] p 351 N93-29484
- INNERS, L. D.**  
Changes in total body water during spaceflight p 86 A93-17548
- INNERS, L. DANIEL**  
Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 N93-23734
- INOUE, M.**  
Development of the nitrogen fixation system for CELSS [SAE PAPER 921238] p 297 A93-41411
- INOUE, NAOTAKE**  
Adaptation of skeletal muscles and physical work capacity in a weightless environment p 38 A93-15527
- INTRATOR, NATHAN**  
Theory of synaptic plasticity in visual cortex [AD-A260052] p 224 N93-23960  
Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238
- IOI, K.**  
Research and development of sensing and manipulation techniques for space robotics on a testbed [AIAA PAPER 93-0794] p 136 A93-24873
- IORIO, D. A.**  
Analysis of injuries following the crash of Avianca Flight 52 p 382 A93-49562
- IOSELIANI, K. K.**  
The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241
- IOVINE, JOHN V.**  
ASDA - Advanced Suit Design Analyzer computer program [SAE PAPER 921381] p 308 A93-41539
- IRJALA, BRITA-LISA**  
Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161
- ISAEV, G. G.**  
Control of breathing under conditions of altered atmospheric density during muscular work p 89 A93-18288
- ISAKSEN, MAI F.**  
Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments p 80 A93-20672
- ISEEV, L. R.**  
Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410
- ISHI, K.**  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556
- ISHIDSUKI, TOMOMI**  
Contribution of psychiatry to life in space p 56 A93-15529
- ISHIJIMA, YOSHIRO**  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- ISHIZAKI, HISAYOSHI**  
Postural stabilization on a moving platform oscillating at high frequencies p 252 A93-35497
- ISHUTIN, V. N.**  
Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166
- ISING, H.**  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556
- ITO, M.**  
Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572
- ITO, MASAO**  
Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge p 379 A93-49178
- Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- IVANCHIKOV, A. P.**  
New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774
- IVANOV, A. S.**  
Parameters of external breathing in an excess-pressure atmosphere p 76 A93-18298
- IVANOV, A. V.**  
Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- IVANOV, K. P.**  
The values of the skin-temperature gradients and their significance for thermoregulation p 9 A93-12862  
The efficiency of thermoregulatory responses in the cooling of the organism p 325 A93-43136
- IVANOV, ORLIN KH.**  
Some proteins keep 'living fossil' pre-sequence p 244 A93-36562
- IVANOVA, T. N.**  
Dynamics of the controlled environment conditions in 'SVET' greenhouse in flight p 152 A93-27460  
The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410
- IVANOVA, TANIA**  
Moistening of the substrate in microgravity p 135 A93-21906
- IVASHCHENKO, A. L.**  
Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft p 45 A93-15175
- IVASHKEVICH, ALEKSANDRA A.**  
Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028
- IVERSEN, OLE-JAN**  
Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190
- IVERSEN, T.-H.**  
The USO-concept applied to a biological model experiment p 210 N93-24379  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme p 226 N93-24382
- IWANYK, EUGENE**  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042
- IWASAKI, KEIGO**  
Telemanipulation experiment using predictive display p 411 A93-56256
- IWASAKI, KENICHI**  
Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge p 379 A93-49178  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- IWASE, SATOSHI**  
Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328
- IWATA, TOSHIKI**  
Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254  
Research of a free-flying telerobot. V - Handling a target with multi-arms p 411 A93-56255  
Skill compensation and dynamic coupling of macro/smart effector system p 411 A93-56260
- IWATA, TSUTOMU**  
Study on environment control and life support technology p 149 N93-20413
- IWATA, YOSHIHIRO**  
Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286
- IZUMI-KUROTANI, AKEMI**  
Japanese treefrog experiment onboard the Space Station Mir p 210 N93-24402
- J**
- JABLONSKI, DAVID**  
Geography of end-Cretaceous marine bivalve extinctions p 273 A93-41075
- JACKS, JOHN D.**  
Helmet visor support apparatus [AD-D015684] p 351 N93-29606
- JACKSON, C. G. R.**  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise [NASA-TM-103942] p 255 N93-26133
- JACKSON, DANIEL L.**  
How do zooplankton feed? A critical microgravity experiment p 158 N93-21097
- JACKSON, L. NEAL**  
Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070  
Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071  
Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080  
Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081  
Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 N93-23082
- JACOBS, BARRY L.**  
Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146
- JACOBS, I.**  
Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing p 389 A93-49218  
Continuous vs. intermittent work with Canadian forces NBC clothing p 389 A93-49219  
Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates [AD-A262762] p 285 N93-28939
- JACOBS, IRA**  
Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALS) [AD-A258364] p 121 N93-18209
- JACOBSON, K. B.**  
Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels [DE93-007815] p 246 N93-26587
- JAHEIN, S.**  
Mir 1992 operations and crew training p 226 N93-24352
- JAHNKE, L. L.**  
The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 153 A93-28691
- JAHNKE, LINDA L.**  
The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 37 A93-14121
- JAHS, GARY**  
Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- JAMES, JOHN**  
First entry operations for spacecraft [SAE PAPER 921384] p 308 A93-41542  
The role of Environmental Health System air quality monitors in Space Station Contingency Operations [SAE PAPER 921414] p 310 A93-41565
- JAMES, JOHN T.**  
Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals [SAE PAPER 921410] p 310 A93-41564
- JAMMES, Y.**  
T wave changes in humans and dogs during experimental dives p 92 A93-20026
- JANES, CRAIG**  
Hypoxic ventilatory responsiveness in Tibetans compared with Han residents of 3,658 m p 280 A93-41120  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121
- JANNASCH, HOLGER W.**  
Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments p 80 A93-20672
- JANNEY, R. P.**  
In vivo testing confirms a blunting of the human cell-mediated immune mechanism during space flight p 167 A93-28732
- JANSEN, J. E.**  
The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704
- JANSEN, J. F.**  
Initial experiments with a myoelectric-based muscle sensor [DE92-016034] p 237 N93-25099

## JARRETT, D. N.

### JARRETT, D. N.

The quest for an integrated flying helmet  
p 319 N93-28860

### JARSTFER, AMIEL G.

The production and use of aeropically grown inocula of VAM fungi in the native plant nursery  
[PB92-204973] p 43 N93-15208

### JASPER, LOUIS J., JR.

Variable-Volume Flushing (V-VF) device for water conservation in toilets  
p 195 N93-22167

### JEFFERS, E. L.

Process Control Water Quality Monitor for Space Station Freedom - Development update  
[SAE PAPER 921264] p 299 A93-41434  
Continuous monitoring of effluent iodine levels of Space Station water using solid state technology  
[SAE PAPER 921265] p 299 A93-41435  
An on-line water quality monitor for Space Station Freedom  
p 364 A93-46801

### JELINSKI, L.

Center of Excellence in Biotechnology (Research)  
[AD-A263598] p 330 N93-29915

### JENKINS, F. H.

Success rate analysis of Navy SERGRAD Flight Training  
p 56 A93-16152

### JENKINS, JAMES P.

EVA/manned systems  
p 312 N93-27789

### JENKINS, RICHARD A.

Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function  
p 18 N93-11299

### JENNINGS, R. T.

Comparison of treatment strategies for space motion sickness  
p 386 A93-52402

### JENNINGS, RICHARD T.

Treatment efficacy of intramuscular promethazine for Space Motion Sickness  
p 212 A93-30283

### JENSEN, DEAN G.

Task-analytic evaluations of Space Station Freedom workstations  
p 187 A93-27157  
Evolving technologies for Space Station Freedom computer-based workstations  
p 313 N93-27794

### JENSEN, MARY C.

Human-in-the-loop evaluation of RMS Active Damping Augmentation  
[AIAA PAPER 93-3875] p 393 A93-51460

### JERNEJ, G.

Monitoring of cardiovascular parameters during the AustroMir space flight  
p 220 N93-24367

### JESSEN, F.

Arterial pulse pressure and vasopressin release in humans during lower body negative pressure  
p 360 A93-47096

### JIANG, BIAN

Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight  
p 272 A93-40548

### JIANG, CHENG

Preliminary observation of influences of three forms of simulated weightlessness on hemorheological characteristics in rabbit  
p 3 A93-13538

### JIANG, GUOHUA

Study of overall analysis method of the man-machine-environment systems  
p 61 A93-14413

### JIANG, QIYUAN

Evaluation of speech technology for enhancing performance of man-machine systems  
p 350 A93-44846

### JIANG, YONG

Study of overall analysis method of the man-machine-environment systems  
p 61 A93-14413

### JIAO, SHUJIN

Study of overall analysis method of the man-machine-environment systems  
p 61 A93-14413

### JOANNES, R.

Flight above a virtual world  
p 145 N93-19766

### JOHANSEN, L. B.

Arterial pulse pressure and vasopressin release in humans during lower body negative pressure  
p 360 A93-47096

### JOHANSEN, LARS B.

Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans  
p 381 A93-49293  
Volume-homeostatic mechanisms in humans during a 12-h posture change  
p 387 A93-52620  
Central cardiovascular pressures during graded water immersion in humans  
p 402 A93-55457

### JOHANSSON, KARL R.

Life support and self-sufficiency in space communities  
p 105 N93-16866

### JOHN, MERVYN

Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training  
p 98 A93-18773

### JOHNSON, ADRIEL D.

Ground testing of bioconvective variables such as morphological characterizations and mechanisms which regulate macroscopic patterns  
p 82 N93-17303

### JOHNSON, CATHERINE C.

The Biological Flight Research Facility  
p 239 A93-34581

### JOHNSON, DAVID G.

Tissue-specific noradrenergic activity during acute heat stress in rats  
p 323 A93-42193

### JOHNSON, DON H.

Simulation of excitatory/inhibitory interactions in single auditory neurons  
[AD-A253614] p 50 N93-13252

### JOHNSON, E. R.

Biological conversion of synthesis gas culture development  
[DE92-001279] p 6 N93-12482

### JOHNSON, F.

The development of an automated cell culture system for use in space life science research  
p 158 N93-21085

### JOHNSON, KENNETH O.

Automated system for analyzing the activity of individual neurons  
p 173 N93-22163

### JOHNSON, LAMAR J.

Life support research and development for the Department of Energy Space Exploration Initiative  
p 137 A93-25309

### JOHNSON, NEAL F.

Candidate technologies for the Integrated Health Management Program  
[NASA-CR-192520] p 217 N93-22655

### JOHNSON, RICHARD F.

The Environmental Symptoms Questionnaire (ESQ): Development and application  
[AD-A264127] p 335 N93-30196

### JOHNSON, THEODORE C.

A study of the effects of micro-gravity on seed germination  
p 40 N93-13167

### JOHNSON, THOMAS E.

Caenorhabditis elegans - A model system for space biology studies  
p 80 A93-20665

### JOHNSON, WALTER W.

Visual cues in low-level flight - Implications for pilotage, training, simulation, and enhanced/synthetic vision systems  
p 264 A93-35918

### JOHNSON, ANDERS

A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES)  
[NASA-CR-192219] p 114 N93-19377

### JOHNSTON, JAMES C.

Locus of the single-channel bottleneck in dual-task interference  
p 55 A93-14098  
Involuntary attentional capture by abrupt onsets  
p 97 A93-17974

The role of spatial attention in visual word processing  
p 339 A93-44922

### JOHNSTON, K. W.

Cerebral blood flow velocities by transcranial Doppler during parabolic flight  
p 84 A93-17533

### JOHNSTON, LAWRENCE

Finite element analysis of a composite artificial ankle  
p 174 N93-22189

### JOHNSTON, NEIL

The development and use of a generic nonnormal checklist with applications in ab initio and Introductory Advanced Qualification Programs  
p 180 A93-27456

### JOHNSTON, SMITH L., III

Animal surgery in microgravity  
p 112 A93-24047

### JOLLER, P. W.

Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity  
p 163 A93-28684

### JOLLY, CLIFFORD

Catalytic oxidation for treatment of ECLSS and PMMS waste streams  
[SAE PAPER 921274] p 301 A93-41443

### JOLLY, CLIFFORD D.

Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] p 112 N93-18351

### JONES, C.

Suction-cup shoes for astronauts - A new method of foot restraint  
p 62 A93-17072

### JONES, D. R.

Results of a structured psychiatric interview to evaluate NASA astronaut candidates  
p 223 A93-32780

### JONES, DENISE R.

Evaluation of conformational and body-axis attitude information for spatial awareness  
p 229 A93-30070

### JONES, ERIC M.

Pressure suit requirements for moon and Mars EVA's  
p 346 A93-42123

### JONES, HEBER D.

Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots  
p 7 A93-10326

The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600

### JONES, J. D.

Engineering verification of the biomass production chamber  
p 67 N93-13996

### JONES, PATRICIA M.

Human-computer cooperative problem solving in satellite ground control  
p 188 A93-27163

### JONES, ROBERT K.

Beryllium toxicity - An update  
p 104 A93-20779

### JONES, TANYA E.

Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario  
[AD-A258744] p 128 N93-20384

### JORALMON, DEFOREST Q.

Night vision goggle training: Development and production of six video programs  
[AD-A258529] p 148 N93-20050

### JORGENSEN, BO B.

Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments  
p 80 A93-20672

### JOUANY, J. M.

Fires on board aircraft: Toxicological risk in flight  
p 126 N93-19694

### JOULIA, F.

T wave changes in humans and dogs during experimental dives  
p 92 A93-20026

### JOVELIC, S.

Back ache in helicopter pilots  
p 382 A93-49566

### JUDAY, RICHARD D.

Human low vision image warping - Channel matching considerations  
p 231 A93-32444  
Design of a reading test for low vision image warping  
p 400 A93-53025

### JUHOS, L. T.

Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise  
[NASA-TM-103942] p 255 N93-26133

### JUKES, T. H.

Relationship between G + C in silent sites of codons and amino acid composition of human proteins  
p 358 A93-47099

### JUNG, MOON R.

Human-like agents with posture planning ability  
p 192 A93-29118

### JUNGUIS, C.

Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 N93-24382

## K

### KABRISKY, MATTHEW

Spectral analysis of the electroencephalographic response to motion sickness  
p 116 A93-24041  
Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy  
p 211 A93-30278

### KACIMI, RACHID

Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart  
p 37 A93-14973

### KACIUBA-USCILKO, H.

Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining  
p 242 A93-35498

### KADYRALIEV, T. K.

Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude  
p 326 A93-44181

### KAEMPF, GEORGE L.

An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission  
[AD-A254984] p 35 N93-12509

### KAHAN, N. J.

Intramuscular pressure and electromyography as indexes of force during isokinetic exercise  
p 380 A93-49291

### KAIKAKOW, M.

Influence of microgravity on immune system and genetic information  
p 220 N93-24370

### KAISER, M. K.

Influence of animation on dynamical judgments  
p 180 A93-28692

### KAISER, MARY K.

Factors influencing perceived angular velocity  
p 97 A93-17800

Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays  
p 102 A93-19987

- Influence of animation on dynamical judgments  
p 98 A93-20275
- Human factors issues in the use of night vision devices  
p 189 A93-27193
- Things that go bump in the light - On the optical specification of contact severity  
p 256 A93-35099
- Visual cues in low-level flight - Implications for pilotage, training, simulation, and enhanced/synthetic vision systems  
p 264 A93-35918
- Perceptual bias for forward-facing motion  
p 339 A93-44940
- KAJI, MASANOBU**  
Mortality experience of cockpit crewmembers from Japan Airlines  
p 385 A93-52306
- KAL'NISH, V. V.**  
Investigation of individual and typological features of an operator's nervous system under different work regimes  
p 339 A93-43024
- KALAWSKY, ROY S.**  
The realities of using visually coupled systems for training applications  
p 228 A93-30063
- KALAYCIOGLU, S.**  
Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues  
[AIAA PAPER 93-1156]  
p 230 A93-31031
- Ground-based control of Space Station Freedom-based robots  
p 263 A93-35570
- KALEPS, INTS**  
Hybrid 2 and hybrid 3 dummy neck properties for computer modeling  
[AD-A255544]  
p 66 N93-13874
- Improving manikin biofidelity  
p 142 N93-19668
- KALINKIN, S. V.**  
Some biochemical and functional characteristics of body state during multihour operator activity under extreme conditions  
p 161 A93-27686
- KALLERGI, MARIA**  
Digital mammography, cancer screening: Factors important for image compression  
p 221 N93-24551
- KALLINGS, LARS O.**  
HIV infection in the nineties  
p 15 N93-11290
- KAMATA, TERUMITSU**  
Manned lunar surface site  
p 316 N93-28033
- KAMBE, FUKUSHI**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men  
p 92 A93-20029
- KAMEGAI, M.**  
Arterial pulse pressure and vasopressin release in humans during lower body negative pressure  
p 360 A93-47096
- KAMEYAMA, YUICHI**  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova  
p 375 A93-49179
- KAMIMORI, GARY**  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance  
p 117 A93-24042
- KAN, E. L.**  
Investigation of hemodynamics and sympatheticoadrenal system activity in air traffic controllers during their work  
p 247 A93-35209
- KANBA, SIGENOBU**  
Contribution of psychiatry to life in space  
p 56 A93-15529
- KANEKO, S.**  
Working hours and fatigue of Japanese flight attendants (FA)  
p 171 A93-28762
- KANNAN, S.**  
A robust model for finding optimal evolutionary trees  
[DE93-010682]  
p 330 A93-30483
- KANSTRUP, INGE-LIS**  
Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects  
p 93 A93-20035
- Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans  
p 332 A93-44180
- KANTOWITZ, BARRY H.**  
Flight deck automation and pilot workload  
[SAE PAPER 921132]  
p 291 A93-41320
- KAPEN, E. H.**  
Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (*Avena sativa*)  
p 358 A93-46472
- KAPLANSKII, A. S.**  
Healing of fractured bone in rats during readaptation following 14-day suspension  
p 241 A93-35260
- KAPLICKY, JAN**  
Vertical regolith shield wall construction for lunar base applications  
p 107 N93-17446
- KARAVIS, A.**  
The MOD (UK) integrated helmet technical demonstrator programme  
p 145 N93-19769
- The quest for an integrated flying helmet  
p 319 N93-28860
- KAREMAKER, J. M.**  
Increased orthostatic blood pressure variability after prolonged head-down tilt  
p 161 A93-28676
- Influence of posture and prolonged head-down tilt on cardiovascular reflexes  
p 161 A93-28677
- Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest  
p 162 A93-28681
- Cardiopulmonary function during 10 days of head-down tilt bedrest  
p 162 A93-28683
- Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology  
p 164 A93-28689
- KARLISCH, P.**  
Mechanically induced alterations in cultured skeletal muscle growth  
p 202 A93-32749
- KARLISCH, PATRICIA**  
Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro  
p 205 A93-33045
- KARRAY, F.**  
On the control of a class of flexible manipulators using feedback linearization approach  
p 231 A93-31533
- KARUPPIAH, NADARAJAH**  
Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*)  
p 329 A93-44941
- KASHIMURA, O.**  
Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau  
p 382 A93-49560
- KASHIMURA, OSAMU**  
Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats  
p 75 A93-18039
- KASSAM, M. S.**  
Cerebral autoregulation in microgravity  
p 173 N93-21112
- KASSAM, MIKE S.**  
Cerebral blood flow velocities by transcranial Doppler during parabolic flight  
p 84 A93-17533
- KASTING, JAMES F.**  
The life span of the biosphere revisited  
p 149 A93-21847
- Algae and oxygen in earth's ancient atmosphere  
p 153 A93-27800
- Habitable zones around main sequence stars  
p 197 A93-28376
- Venus: A search for clues to early biological possibilities  
p 113 N93-18549
- KATO, KATHARINE**  
Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium  
p 329 A93-44935
- KATO, MASASHI**  
Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots  
p 333 A93-45321
- KATOU, NOBUTAKA**  
Conceptual study of manned lunar surface site  
p 316 N93-28031
- KATUNTS, V. P.**  
Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars  
p 90 A93-18410
- KATUNTSEV, V. P.**  
Ultrasonic location of gas bubbles in the vascular bed of a person working in a space suit  
p 262 A93-35239
- KATZ, R.**  
Track structure model for damage to mammalian cell cultures during solar proton events  
p 75 A93-18073
- KATZ, ROBERT**  
Katz model prediction of *Caenorhabditis elegans* mutagenesis on STS-42  
[NASA-TM-4383]  
p 50 N93-13023
- KAUFMAN, JONATHAN W.**  
Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia  
[AD-A255120]  
p 34 N93-12291
- Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress  
[AD-A258552]  
p 148 N93-19955
- KAUFMAN, L.**  
Cognition and the brain  
[AD-A255483]  
p 59 N93-14788
- Duration of alpha suppression increases with angle in a mental rotation task  
[AD-A261592]  
p 260 N93-26435
- Neuromagnetic investigation of cortical regions underlying short-term memory  
[AD-A261445]  
p 261 N93-26521
- KAUFMAN, LLOYD**  
Neuromagnetic investigations of cortical regions underlying short-term memory  
[AD-A255788]  
p 58 N93-14646
- Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate  
[AD-A261593]  
p 260 N93-26436
- KAUFMAN, PETER B.**  
Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*)  
p 329 A93-44941
- Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (*Avena sativa*)  
p 358 A93-46472
- KAWAI, Y.**  
Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt  
p 381 A93-49295
- KAWAMURA, K.**  
Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes  
p 377 A93-49561
- KAWASHIRO, KATSUHIRO**  
On the reaction of 2-aminopropionitrile in aqueous media  
p 354 A93-43791
- KAY, EDWIN J.**  
Age 60 Project: Consolidated database experiments  
[HS-TR-8025-3C(R2)]  
p 314 N93-27851
- KAY, G. G.**  
Relating cognitive function to military aviator performance in early HIV infection  
p 17 N93-11298
- KAY, GARY G.**  
Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus  
p 130 A93-25209
- KAYE, DONALD**  
Heterogeneity of changes in lymphoproliferative ability with increasing age  
p 79 A93-20662
- KAYSER, BENGT**  
Energy expenditure climbing Mt. Everest  
p 92 A93-20031
- Protein absorption and energy digestibility at high altitude  
p 115 A93-21683
- KEEFE, A. A.**  
AFTERISE: Deep body temperature following exercise  
[AD-A259887]  
p 218 N93-23984
- KEEFE, J. RICHARD**  
Life sciences recruitment objectives  
p 205 N93-22623
- KEER, T. J.**  
Computer aided methods for simulating occupant response to impact using OASYS DYNA3D  
p 142 N93-19666
- KEIFER, D. A.**  
New approaches to the measurement of chlorophyll, related pigments and productivity in the sea  
[NASA-CR-190879]  
p 42 N93-13612
- KEIL, L. C.**  
Drug effects on orthostatic intolerance induced by bedrest  
p 86 A93-17544
- Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men  
[NASA-TM-103949]  
p 6 N93-12014
- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise  
[NASA-TM-103942]  
p 255 N93-26133
- KEIPERT, PETER E.**  
Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally  
p 111 A93-21684
- KEITH, G.**  
Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation  
p 49 A93-17442
- KEKSZ, WILLIAM O.**  
The Servicing Aid Tool  
p 192 A93-29116
- KELLER, BIRGIT**  
Photobiological investigations on spores of *Streptomyces griseus*  
[ESA-TT-1269]  
p 277 N93-29274
- KELLER, T. S.**  
Bone loss and human adaptation to lunar gravity  
p 51 N93-14002
- KELLER, TONY S.**  
Predicting skeletal adaptation in altered gravity environments  
p 213 A93-30772
- KELLEY, CHERYL A.**  
Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake  
p 38 A93-16544
- KELLEY, WILLIAM A.**  
Flow cytometric analysis of lymphocyte surface markers following a 1-Gy dose of gamma radiation  
p 281 A93-41170
- KELLY, GEORGE**  
Helmet-mounted area of interest  
p 228 A93-30060

## KELLY, GEORGE R.

### KELLY, GEORGE R.

Helmet-mounted area-of-interest display  
[AD-A258275] p 139 N93-18029

### KELLY, KEVIN J.

Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements  
[SAE PAPER 921347] p 305 A93-41506

### KELLY, M.

Control of infection in an international airline  
p 407 A93-52867

### KELLY, TAMSIN

Sleep inertia: Is there a worst time to wake up?  
[AD-A256602] p 52 N93-14240

### KEMP, C.

Monitoring of cardiovascular parameters during the AustroMir space flight  
p 220 N93-24367

### KENDALL, ROBERT R.

A cognitive classification of pilot performance in air combat  
p 347 A93-42814

### KENDALL, SARAH N.

Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function  
p 18 N93-11299

### KENNEDY, ROBERT S.

An individual differences approach to fitness-for-duty assessment  
p 178 A93-27178  
Changes in the dark focus of accommodation associated with simulator sickness  
p 379 A93-49222  
Profile analysis of simulator sickness symptoms - Application to virtual environment systems  
p 381 A93-49399

Prediction of motion sickness susceptibility  
p 403 A93-55940

Simulator sickness  
p 403 A93-55944

Motion and human performance  
p 406 A93-55949

### KENNER, T.

Monitoring of cardiovascular parameters during the AustroMir space flight  
p 220 N93-24367

### KENNY, SEAN

Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms  
p 101 A93-18710

### KENYON, ROBERT V.

The effects of field of view size on the control of roll motion  
p 349 A93-43722

### KERGUELEN, M.

Fires on board aircraft: Toxicological risk in flight  
p 126 N93-19694

### KERLEY, JAMES J.

Compliant walker  
[NASA-CASE-GSC-13348-2] p 53 N93-14708

### KERSTHOLT, J. H.

Decision making in a dynamic task environment: The effect of time pressure  
[AD-A256557] p 58 N93-14602

### KESSLER, JOHN O.

The internal dynamics of slowly rotating biological systems  
p 375 A93-49208

### KEYSER, PAUL I.

The application of filtration technology within the Water Processor on board Space Station Freedom  
[SAE PAPER 921270] p 300 A93-41440

### KHANNA, RAJ K.

Computational study of radiation chemical processing in comet nuclei  
p 109 A93-17982

### KHARAT'YAN, E. F.

Ozone - A new aspect of its effect on microorganisms  
p 398 A93-54971

### KHARAZMI, A.

Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines  
p 280 A93-41123

### KHARITONOV, I.

Development and implementation of the MotoMir experiment on the Mir Space Station  
p 220 N93-24363

### KHATWA, R.

A comparative evaluation of three take-off performance monitor display types  
[AIAA PAPER 93-3608] p 406 A93-52669

### KHOLODOV, YU. A.

The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field  
p 363 A93-46966

### KHOURY, GEORGE J.

Telerobotic system performance measurement - Motivation and methods  
p 191 A93-29114

### KIBBE, MARION P.

Man-machine interface with simulated automatic target recognition systems  
p 147 N93-19781

### KIDA, MITSURO

Cognitive performance and event-related brain potentials under simulated high altitudes  
p 331 A93-42189

### KIDA, TAKASHI

Optimal manipulator trajectories for space robots  
[AAS PAPER 91-669] p 410 A93-55838

### KIEBZAK, GARY M.

Age-related bone changes  
p 93 A93-20655

### KIELAR, ALAN

Eye slaved pointing system for teleoperator control  
p 101 A93-19090

### KIJIMA, RYUGO

Human behavior in virtual environments  
p 233 A93-33447

### KIKUCHI, K.

Development of the nitrogen fixation system for CELSS  
[SAE PAPER 921238] p 297 A93-41411

### KIKUKAWA, AZUSA

Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots  
p 333 A93-45321

### KIKUYAMA, S.

Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes  
p 377 A93-49561

### KILDUFF, PATRICIA W.

A study of the effects of lens focal length on remote driver performance  
[AD-A263191] p 321 N93-28941

### KILGORE, M. V., JR.

Microbiological methods for the water recovery systems test, revision 1.1  
[NASA-CR-184390] p 64 N93-12966

### KILGORE, MELVIN V., JR.

ECLSS medical support activities  
[NASA-CR-184429] p 23 N93-12427

Methods development for total organic carbon accountability  
[NASA-CR-184438] p 40 N93-12949

### KILGOUR, ROBERT D.

Cardiovascular responses during recovery from exercise and thermal stress  
p 212 A93-30282

### KIM, DONG W.

Automated system for early breast cancer detection in mammograms  
p 253 N93-25568

### KIM, DONGHERN

Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*)  
p 329 A93-44941

### KIM, JUNG H.

Recognition of partially occluded threat objects using the annealed Hopfield network  
p 142 N93-19466

### KIM, W. S.

Operator performance with alternative manual control modes in teleoperation  
p 390 A93-49397

### KIM, WON S.

Fusing human and machine skills for remote robotic operations  
p 137 A93-24994

An operator interface design for a telerobotic inspection system  
[AIAA PAPER 93-1160] p 231 A93-31034

A teleoperation training simulator with visual and kinesthetic force virtual reality  
p 233 A93-33448

Remote surface inspection system  
p 410 A93-55469

### KIMCHI, RUTH

Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements  
p 287 A93-40772

### KIMES, KENNETH L.

Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)  
[AD-A253394] p 30 N93-10288

### KIMURA, KAZUHIKO

Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water  
p 94 A93-20898

### KING, JAMES M.

Interpupillary and vertex distance effects on field-of-view and acuity with ANVIS  
[AD-A261259] p 268 N93-26265

### KING, NANCY

Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894

### KING, PHILIP A.

Advanced displays for military operations  
[AIAA PAPER 92-4243] p 28 A93-13350

### KINNEY, S.

Integration of exterior lighting systems and night vision imaging systems  
[AD-A254826] p 63 N93-12732

### KIRBY, CHRISTOPHER R.

Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy  
p 78 A93-20033

Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats  
p 326 A93-44179

### KIRKPATRICK, GARY

Phytoplankton photosynthesis in natural mixed layers  
[AD-A255010] p 39 N93-12871

### KIRLIK, ALEX

Modeling strategic behavior in human-automation interaction - Why an 'aid' can (and should) go unused  
p 394 A93-52502

Acquisition and production of skilled behavior in dynamic decision-making tasks  
[NASA-CR-192361] p 181 N93-20908

### KIRSCH, KARL

Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones  
p 251 A93-35495

### KIRSCHVINK, JOSEPH L.

Magnetic domain state and coercivity predictions for biogenic greigite (Fe<sub>3</sub>S<sub>4</sub>) - A comparison of theory with magnetosome observations  
p 38 A93-16481

### KISELEV, R. K.

Some biochemical and functional characteristics of body state during multihour operator activity under extreme conditions  
p 161 A93-27686

### KISELEV, V. I.

Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity  
p 240 A93-35224

### KISTEMAKER, I. C.

An automated processing system for food frequency and nutrition knowledge questionnaire  
p 367 N93-32241

### KITAMURA, TOSHINORI

Contribution of psychiatry to life in space  
p 56 A93-15529

### KITSOU, A.

Lipidemic profile of Hellenic Airforce officers  
p 362 N93-32250

### KLASSI, JASON D.

Lunar subsurface architecture enhanced by artificial biosphere concepts  
p 107 N93-17448

### KLASSON, K. T.

Biological conversion of synthesis gas culture development  
[DE92-001279] p 6 N93-12482

### KLEIN, DAVID L.

Modeling of a full vision system using combined Visual/Haptic search for remote object identification  
[AD-A260977] p 266 N93-25867

### KLEIN, HAROLD P.

Exobiology science objectives at a lunar base  
p 71 A93-17435

The solar system: Importance of research to the biological sciences  
p 113 N93-18547

### KLEIN, LYNN SUZANNE

A study of the effects of micro-gravity on seed germination  
p 40 N93-13167

### KLEIN, PETER D.

Comparison of total body water estimates from O-18 and bioelectrical response prediction equations  
[NASA-TP-3299] p 218 N93-23734

### KLEIN, STANLEY A.

Spatio-temporal masking: Hyperacuity and local adaptation  
[AD-A257934] p 121 N93-18006

### KLEIN, W.

Influence of microgravity on immune system and genetic information  
p 160 A93-26572

Influence of microgravity on immune system and genetic information  
p 220 N93-24370

### KLEISS, JAMES A.

Multidimensional scaling analysis of terrain features relevant for simulating low-altitude flight  
p 188 A93-27186

Perceptual dimensions of visual scenes relevant for simulating low-altitude flight  
[AD-A254645] p 57 N93-12662

### KLIMOVITSKY, V.

Thermoregulatory responses of rhesus monkeys during spaceflight  
p 154 A93-28706

### KLINKHAMER, J. F. F.

A body mass measurement device based on the oscillation principle  
p 221 N93-24400

### KLISS, M. H.

Design and evaluation of a payload to support plant growth onboard COMET 1  
[SAE PAPER 921389] p 308 A93-41547

### KLISS, MARK

A novel membrane device for the removal of water vapor and water droplets from air  
[SAE PAPER 921322] p 304 A93-41484

### KLIUSHNIKOVA, O. N.

Vestibulo-oculomotor responses under conditions of immersion hypokinesia  
p 251 A93-35256



- KLOKKER, M.**  
Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines p 280 A93-41123
- KLUTE, GLEN K.**  
Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system [NASA-TM-104769] p 321 N93-29044
- KLUTE, GLENN K.**  
A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests [SAE PAPER 921154] p 293 A93-41337  
Pilot investigation - Nominal crew induced forces in zero-g [SAE PAPER 921155] p 293 A93-41338  
A study to explore locomotion patterns in partial gravity environments [SAE PAPER 921157] p 293 A93-41340  
Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 N93-12211  
A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population [NASA-TP-3286] p 96 N93-16619  
Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment [NASA-TM-104767] p 234 N93-23129  
Two techniques for measuring locomotion impact forces during zero G [NASA-TP-3305] p 217 N93-23410  
Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 N93-25736  
Anthropometric survey of the astronaut applicants and astronauts from 1985 to 1991 [NASA-RP-1304] p 321 N93-29324
- KNAPP, ROBERT K.**  
Response to automated function failure cue - An operational measure of complacency p 176 A93-27147
- KNEE, H. E.**  
Human factors engineering: A key element of instrumentation and control system design [DE93-006731] p 264 N93-25415
- KNELLER, EDWARD W.**  
The effects of field of view size on the control of roll motion p 349 A93-43722
- KNEPTON, J. C., JR.**  
Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz [AD-A258136] p 120 N93-17985
- KNEPTON, JAMES C.**  
Effects of laser glare on visual search performance p 180 A93-28158
- KNIGHT, SHARON L.**  
Stimulation of lettuce productivity by manipulation of diurnal temperature and light p 327 A93-44879  
Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce p 357 A93-46468  
Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation p 357 A93-46469  
Minitron II system for precise control of the plant growth environment p 357 A93-46470  
Effects of CO<sub>2</sub> and photosynthetic photon flux on yield, gas exchange and growth rate of *Lactuca sativa* L. 'Waldmann's Green' p 397 A93-52723
- KNOTT, W. M.**  
Environmental monitoring and research at the John F. Kennedy Space Center p 154 A93-28714  
Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715
- KNOTT, W. M., III**  
Engineering verification of the biomass production chamber p 67 N93-13996
- KNOX, GLENN**  
Phenytol as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162
- KNOX, J. C.**  
Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations [SAE PAPER 921231] p 297 A93-41405
- KNOX, JOHN**  
Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom [SAE PAPER 921216] p 296 A93-41392
- KNUDSEN, CARSTEN**  
Self-programming of matter and the evolution of proto-biological organizations [IDE92-015241] p 5 N93-10628
- KNUTH, SUSAN L.**  
Response of genioglossus EMG activity to passive tilt in men p 279 A93-41118
- KOBAYASHI, KENSEI**  
An experimental approach to chemical evolution in submarine hydrothermal systems p 74 A93-18008
- KOBAYASHI, T.**  
High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709
- KOBRICK, JOHN L.**  
The Environmental Symptoms Questionnaire (ESQ): Development and application [AD-A264127] p 335 N93-30196  
Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 N93-32269
- KOCH, KENNETH L.**  
Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility p 116 A93-24037
- KOEDA, MITSUHIRO**  
Telepresence testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398
- KOEING, DAVID W.**  
Kinetic tetrazolium microtiter assay [NASA-CASE-MS-C-21979-1] p 82 N93-17049
- KOGA, KAZUO**  
Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328
- KOHL, R.**  
Salivary total protein and experimental Coriolis sickness p 383 A93-49573
- KOHL, RANDALL L.**  
Beta-endorphin and arginine vasopressin following stressful sensory stimuli in man p 47 A93-16158  
New pharmacologic approaches to the prevention of space/motion sickness p 85 A93-17538  
Endocrinology of space/motion sickness p 403 A93-55935
- KOHN, GARY M.**  
Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499
- KOHN, S.**  
Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004  
Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177
- KOIKE, J.**  
Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408
- KOIZUMI, T.**  
High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709
- KOLESNIKOV, M. P.**  
Flavine-dependent processes in model prebiological systems p 372 A93-47125  
Linear tetrapyrroles (phycobins) in a model prebiological system p 398 A93-53350
- KOLKA, MARGARET A.**  
Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise [AD-A259068] p 124 N93-19072
- KOLODNEY, MATT**  
Conceptual design of ECLSS microgravity test beds [SAE PAPER 921164] p 294 A93-41346
- KOLODNEY, MATTHEW**  
Zero-G life support for Space Station Freedom p 233 N93-22640
- KOLOMIEVSKII, M. L.**  
The efficiency of a prophylactic-rehabilitational treatment of civil-aviation flight crews p 91 A93-18415
- KONDAKOV, A. V.**  
The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649
- KONDAKOVA, L. N.**  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419
- KONDRASKE, GEORGE V.**  
Telerobotic system performance measurement - Motivation and methods p 191 A93-29114
- KONOVALENKO, O. O.**  
The state of the endocrine system of rats of different age under conditions of immobilization stress and biomas administration p 242 A93-35671
- KOONCE, JEFFERSON M.**  
Visual augmentation and scene detail effects in flight training p 180 A93-27454
- KOPANEV, V. I.**  
Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166
- K.E. Tsiolkovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409
- KOPPENSTEINER, C.**  
AUDIMIR - Directional hearing at microgravity p 159 A93-26570
- KOPYDLOWSKI, K. M.**  
Effects of antithrostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693
- KOPYLOVSKIY, S. A.**  
Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101
- KORDENKO, A. N.**  
Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252
- KORIAK, IU. A.**  
Contractile properties of the calf triceps muscle in humans exposed to simulated weightlessness p 45 A93-15168  
Effect of prolonged antithrostatic bed rest hypokinesia on functional properties of the neuromuscular system in humans p 116 A93-23151
- KORINEVSKAYA, I. V.**  
The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966
- KORINEVSKIY, A. V.**  
The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966
- KORITSAS, E.**  
Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation p 175 A93-27139
- KORNILOVA, L.**  
OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571  
Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 N93-24366
- KORNILOVA, L. N.**  
The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219  
Vestibulo-oculomotor responses under conditions of immersion hypokinesia p 251 A93-35256
- KOROL'KOV, V. I.**  
Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773
- KOROTAEV, M. M.**  
Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255
- KORSHEVER, N. G.**  
Adaptation of young pilots to new conditions of their work (Social-psychological aspects) p 256 A93-35220
- KORSHUNOVA, V. A.**  
Some features characterizing the supply of astronauts with vitamins C, B1, B2, and B6 during nourishment from canned-food rations on long-term space flights p 249 A93-35231
- KORSUNSKII, S. B.**  
Vestibulo-oculomotor responses under conditions of immersion hypokinesia p 251 A93-35256
- KORTSCHOT, H. W.**  
Barotrauma in Boeing 737 cabin crew p 278 A93-39706
- KOSERENKO, O.**  
COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569  
Space and cognition - The measurement of behavioral functions during a 6-day space mission p 405 A93-55164
- KOSHCHEEVA, T. A.**  
Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672
- KOSMO, JOSEPH**  
Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems [SAE PAPER 921258] p 299 A93-41428
- KOSMOLINSKII, F. P.**  
K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions p 90 A93-18406  
K.E. Tsiolkovsky on the problem of human survival in extreme environments (On the earth and in space) p 77 A93-18407

**KOSSACK, MERRICK FRANK**

Acquisition and production of skilled behavior in dynamic decision-making tasks  
[NASA-CR-192361] p 181 N93-20908

**KOSLYN, STEPHEN M.**

Neuropsychological components of object identification  
[AD-A261449] p 259 N93-26347

**KOSTKIN, V. B.**

Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287

**KOTULAK, JOHN C.**

The effects of pyridostigmine bromide on visual performance p 87 A93-18034  
In-flight field-of-view with ANVIS  
[AD-A259905] p 235 N93-23992

**KOVAC, R.**

Influence of microgravity on immune system and genetic information p 160 A93-26572  
Influence of microgravity on immune system and genetic information p 220 N93-24370

**KOVACH, PETER**

CREWCUT - A new tool for predicting human performance in conceptual systems p 178 A93-27179

**KOVALENKO, E. A.**

The problem of oxygen regimen in extreme conditions p 160 A93-27685  
Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751

**KOWLER, EILEEN**

Eye movements and visual information processing  
[AD-A250198] p 24 N93-10278  
Eye movements and visual information processing  
[AD-A259955] p 225 N93-24297

**KOZAK, L. M.**

Investigation of individual and typological features of an operator's nervous system under different work regimes p 339 A93-43024

**KOZLOV, S. B.**

Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness p 239 A93-35211

**KOZLOV, V. V.**

Psychophysiological factors which impair the professional reliability of a pilot in emergency situations p 129 A93-23150

**KOZLOVA, V. G.**

Vestibulo-oculomotor responses under conditions of immersion hypokinesia p 251 A93-35256

**KOZLOVSKAIA, I. B.**

Effect of prolonged antithrostatic bed rest hypokinesia on functional properties of the neuromuscular system in humans p 116 A93-23151

**KOZLOVSKAYA, I.**

Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363

**KOZLOVSKAYA, I. B.**

Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362

**KOZLOVSKI, A. P.**

New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774

**KOZYAVKIN, SERGEI A.**

DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580

**KRAEMER, M.**

Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 N93-19683

27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696

Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697

**KRAH, REGIS**

DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580

**KRAMER, ARTHUR F.**

Cognitive function at high altitude p 386 A93-52505

**KRANTZ, JOHN H.**

Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990

**KRASIL'NIKOV, G. V.**

Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223

**KRASNOV, I. B.**

Quantitative autoradiographic analysis of muscarinic cholinergic and GABA<sub>A</sub> (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743  
Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212

**KRASSNIGG, F.**

Sperm motility under conditions of weightlessness p 156 A93-28730

**KRATSCHMANN, C.**

Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302

**KRAUHS, J. M.**

Metabolic changes observed in astronauts p 84 A93-17535

**KRAUS, E. T.**

Alteration in human mononuclear leucocytes following space flight p 165 A93-28705

**KRAUSE, D.**

Mechanisms of microwave induced damage in biologic materials  
[AD-A255799] p 42 N93-14648

**KRAUSKOPF, JOHN**

Higher order mechanisms of color vision  
[AD-A256369] p 60 N93-15329

**KREIC, M. E.**

Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703

**KREGEL, KEVIN C.**

Tissue-specific noradrenergic activity during acute heat stress in rats p 323 A93-42193

**KREUZBERG, K.**

Bioregenerative life support as self-sustaining ecosystem in space p 231 A93-32073  
CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 N93-24401

**KREWSKI, D.**

Cancer risk assessment with intermittent exposure p 171 A93-28766

**KRIPPENDORF, B. B.**

Distinguishing unloading- versus reloading-induced changes in rat soleus muscle p 157 A93-28763

**KRISHALKA, LEONARD**

The earliest fossil evidence for sexual dimorphism in primates p 152 A93-27775  
First skulls of the early Eocene primate *Shoshonius cooperi* and the anthropoid-tarsier dichotomy p 202 A93-32670

Revision of the Wind River faunas, early Eocene of central Wyoming. X - *Bunophorus* (Mammalia, Artiodactyla) p 203 A93-33026

Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystricomorphous rodent (Mammalia: Rodentia) p 328 A93-44903

**KRISTAL-BONEH, E.**

Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729

**KRISTENSEN, M. S.**

Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096

**KRITSKII, MIKHAIL S.**

Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity p 1 A93-11199

**KRIVENKO, A. I.**

The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294

**KRIVOSHCHIKOV, S. G.**

Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214

**KROCK, L. P.**

Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721

**KROCK, LARRY P.**

Electromyographic activity while performing the anti-G straining maneuver during high sustained acceleration p 47 A93-16155

Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and unfit men p 385 A93-52304

**KROIS, PAUL A.**

Air Traffic Control facility lighting p 188 A93-27167

**KRONAUER, R. E.**

Colour is what the eye sees best p 159 A93-26245  
The effects of luminance boundaries on color perception  
[AD-A250705] p 22 N93-11841

**KROPP, J.**

Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685

**KROPP, MICHAEL A.**

Carbonaceous chondrites and the origin of life p 412 A93-55997

**KROTOV, V. P.**

Hemodynamics in monkeys during antithrostatic hypokinesia at angles of -6 and -20 deg p 241 A93-35259

Dynamics of the central and peripheral circulation of active rats on the first day of antithrostatic hypokinesia (The role of training) p 242 A93-35261  
Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773

**KRUEGER-ANDERSON, GRETCHEN M.**

Flight director information and pilot performance in instrument approaches  
[AD-A258186] p 131 N93-17857

**KRUIJER, WIEBE**

Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214

**KRUK, R. V.**

Simulator sickness experience in simulators equipped with fiber optic helmet mounted display systems  
[AIAA PAPER 92-4135] p 136 A93-24490

**KUBARKO, A. I.**

The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034

**KUBO, K.**

High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709

**KUBO, T.**

Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711  
Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712

**KUBOTA, N.**

Research and development of sensing and manipulation techniques for space robotics on a testbed  
[AIAA PAPER 93-0794] p 136 A93-24873

**KUCERA, RICHARD F.**

Metabolic factors influencing myocardial recovery from acidosis (CIC3)  
[AD-A252376] p 14 N93-10796

**KUCHAR, JAMES**

Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377

**KUCHAR, JAMES K.**

An exploratory study of plan-view terrain displays for air carrier operations p 289 A93-39573

**KUDRIYATSEVA, I. N.**

Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage p 111 A93-23074

**KUEHN, G. I.**

Engineer stress and fatigue: Pilot tests  
[PB93-175008] p 351 N93-29675

**KUEHNEL, CHRISTIAN**

Swimming behavior of the unicellular flagellate, *Euglena gracilis*, in simulated and real microgravity p 151 A93-26549

**KUHL, D. E.**

New techniques for positron emission tomography in the study of human neurological disorders  
[DE92-015353] p 23 N93-11873

**KUHL, K. D.**

The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555

**KULCINSKI, G. L.**

Potential of derived lunar volatiles for life support p 67 N93-13998

**KULEV, A. P.**

Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238

**KULIKOV, V. P.**

Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity p 240 A93-35224

**KULINICHEVA, M. M.**

Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263

**KULL, FREDERICK G., JR.**

Line-of-sight determination in real-time simulations  
[AIAA PAPER 93-3567] p 406 A93-52666

**KULL, ROBERT**

Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems  
[SAE PAPER 921272] p 301 A93-41442

- KUMAR, ANOOPA**  
Altered immunological response in mice subjected to stress and exposed to fungal spores  
[SAE PAPER 921215] p 274 A93-41391
- KUMAR, D.**  
A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019917] p 40 A93-13034  
A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019916] p 40 A93-13083
- KUMAR, K. S.**  
Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL) p 39 A93-17429
- KUMAR, K. V.**  
The influence of prior exercise at anaerobic threshold on decompression sickness p 8 A93-10333  
Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153
- KUMAR, K. VASANTHA**  
Issues on human acceleration tolerance after long-duration space flights  
[NASA-TM-104753] p 334 A93-29651
- KUMEGAWA, M.**  
Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728
- KUNG, E. Y.**  
Pyrolysis of vegetation by brief intense irradiation p 324 A93-42915
- KUNYAEV, V. YU.**  
Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773
- KUO, ADDISON**  
SHARC: Space Habitat, Assembly and Repair Center  
[NASA-CR-192031] p 140 A93-18153
- KUO, ARTHUR DANIEL**  
Visualization techniques for analyzing control of human movement: Affine mappings between multi-dimensional spaces p 353 A93-30204
- KUO, K. C.**  
Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442
- KUOPPA, K.**  
Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia  
[FOA-B-40422-4.4] p 275 A93-28212
- KUPERMAN, GILBERT G.**  
Design of the man-machine interface for an automatic target cue system p 348 A93-42843
- KUPRA, DEBRA**  
Health maintenance facility system effectiveness testing  
[NASA-TM-104737] p 372 A93-32328
- KUPRIANOV, V. A.**  
Investigation of hemodynamics and sympathoadrenal system activity in air traffic controllers during their work p 247 A93-35209
- KURIHARA, YOSHINORI**  
Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321
- KURMAZENKO, EHDUARD A.**  
Functions simulation model of integrated regenerable life support system  
[SAE PAPER 921201] p 295 A93-41377
- KUROKAWA, HIDEAKI**  
Experimental and theoretical study on membrane distillation using thermopervaporation  
[SAE PAPER 921397] p 309 A93-41554
- KUROSAKI, YUKO S.**  
Flight crew sleep during multiple layover polar flights p 380 A93-49226
- KURUP, VISWANATH P.**  
Altered immunological response in mice subjected to stress and exposed to fungal spores  
[SAE PAPER 921215] p 274 A93-41391
- KUUSELA, TIMO**  
Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high +Gz forces p 384 A93-52298
- KUZ'MIN, A. S.**  
The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172
- KUZ'MINA, G. I.**  
Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism p 360 A93-46968
- KUZNETS, E. I.**  
K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions p 90 A93-18406  
Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410
- KVAMSOE, K.**  
Changes in food and energy intake in military aircrew p 368 A93-32246
- KWETNANSKI, R.**  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207
- KYRIAKOS, K.**  
Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 A93-11318  
Lipidemic profile of Hellenic Airforce officers p 362 A93-32250  
Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 A93-32256
- ## L
- L'VOV, NIKOLAI P.**  
Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity p 1 A93-11199
- LABOURETTE, X.**  
Development of a 500 hPa shoulder joint for the European EVA Space Suit System  
[SAE PAPER 921257] p 299 A93-41427
- LACEY, JAMES C., JR.**  
Experimental studies on the origin of the genetic code and the process of protein synthesis - A review update p 73 A93-17822
- LACKNER, J. R.**  
Influence of gravito-inertial force level on vestibular and visual velocity storage in yaw and pitch p 165 A93-28701  
Gravito-inertial force level affects the appreciation of limb position during muscle vibration p 169 A93-28744  
Spatial orientation in weightless environments p 388 A93-49563
- LACKNER, JAMES R.**  
Spatial orientation, adaptation, and motion sickness in real and virtual environments p 382 A93-49403
- LACOLLEY, P. J.**  
Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716
- LADISCH, MICHAEL R.**  
Biomass productivity and sustainability of a bioregenerative life-support system  
[SAE PAPER 921359] p 307 A93-41518
- LAFORCE, SOREN**  
A demonstration of motion base design alternatives for the National Advanced Driving Simulator  
[NASA-TM-103881] p 236 A93-24490
- LAI, STEVE**  
Timing considerations of Helmet Mounted Display performance p 233 A93-33449
- LAING, ALAN**  
Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416
- LAIRD, JOHN E.**  
Dimensions of complexity in learning from interactive instruction p 191 A93-29111
- LAITINEN, J. T.**  
The prediction of the adaptation of circadian rhythms to rapid time zone changes p 278 A93-39714
- LAKATTA, EDWARD**  
Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- LAKE, JAMES A.**  
DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580
- LALIBERTE, M.-F.**  
Subjective and behavioral effects associated with repeated exposure to narcosis p 7 A93-10327
- LAM, C. W.**  
Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705
- LAM, CHI-KIN**  
Adaptive autonomous target cue p 148 A93-19784
- LAM, KWOK-WAI**  
Investigation of laser-induced retinal damage  
[AD-A264096] p 338 A93-31094
- LAMB, THEODORE A.**  
Introduction to training decisions modeling technologies: The training decisions system  
[AD-A249862] p 27 A93-12252
- LAMBECK, ROBERT W.**  
Characteristics and requirements of robotic manipulators for space operations p 182 A93-27003
- LAMBIN, M.**  
Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space p 130 A93-25207
- LAMPE, L.**  
Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972
- LAN, JINGQUAN**  
Effects of antimotion sickness drug mixture B on ultrastructures of cerebral and cerebellar cortexes in suspended rabbits p 10 A93-13704
- LAN'SHINA, O. E.**  
The problem of oxygen regimen in extreme conditions p 160 A93-27685  
Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751
- LANCASTER, JACK L.**  
Proceedings of Workshop 1: The Human Brainmap Database  
[AD-A260720] p 258 A93-25654
- LAND, MICHAEL F.**  
Predictable eye-head coordination during driving p 57 A93-16373
- LANDOLT, J. P.**  
Effects of long-term weightlessness on roll circularvection p 279 A93-39725
- LANE, HELEN W.**  
Nutrition p 81 A93-16805
- LANE, L.**  
Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687
- LANE, L. D.**  
Effects of head-down tilt for 10 days on the compliance of the leg p 162 A93-28680  
The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686
- LANE, LYNDIA D.**  
Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968
- LANE, NORMAN E.**  
Profile analysis of simulator sickness symptoms - Application to virtual environment systems p 381 A93-49399  
Training high performance skills using above real-time training  
[NASA-CR-192616] p 225 A93-24192
- LANG, R. E.**  
Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688
- LANGE, KEVIN E.**  
Modeling of membrane processes for air revitalization and water recovery  
[SAE PAPER 921352] p 306 A93-41511
- LAPA, V. V.**  
The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit p 10 A93-12969
- LAPAEV, E. V.**  
Subjective reactions and objective assessment of the auditory and ventilatory functions of the middle ear during changes in atmospheric pressure p 45 A93-15174  
Occupational health problems in aviation medicine p 252 A93-36743
- LAPRISE, BRAD**  
Evaluation of two microclimate cooling air vests on a heated mannequin  
[AD-A259410] p 194 A93-21269
- LAPSHIN, V. P.**  
Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- LARBOT, A.**  
Design and preliminary testing of a membrane based water recycling system for European manned space missions  
[SAE PAPER 921396] p 309 A93-41553
- LARIMER, F. W.**  
Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels  
[DE93-007815] p 246 A93-26587
- LARIMER, JAMES**  
Human visual performance model for crewstation design p 182 A93-26887  
Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443

# LARINA, I. M.

Visualization and modeling of factors influencing visibility in computer-aided crewstation design  
[SAE PAPER 921135] p 292 A93-41323

# LARINA, I. M.

Principles of the organization of calcium metabolism  
p 7 A93-10124

# LARINA, O. N.

Protein composition of the blood plasma of cosmonauts after lengthy orbital flights p 249 A93-35243  
Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254

# LARISH, JOHN F.

Active control versus passive observation in a simulated flight task p 179 A93-27196

# LAROCHELLE, F. T.

Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327

# LAROSA, ANGELA

Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression p 327 A93-44184

# LARROQUE, P.

Flight above a virtual world p 145 N93-19766

# LARSEN, RONALD L.

Architecture of autonomous systems [NASA-CR-192974] p 266 N93-26047

# LASKEY, KATHRYN B.

Real-time expert system interfaces, cognitive processes, and task performance - An empirical assessment p 394 A93-52503

# LATHERS, CLAIRE M.

Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530  
Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547  
Cardiovascular adaptation to spaceflight p 86 A93-17550

# LATTIMORE, MORRIS R.

The use of extended wear contact lenses in the aviation environment: An Army-wide study [AD-A260938] p 255 N93-26218

# LAU, VICKITT

A monitoring and control system for complex man-machine systems: Preliminary design p 70 N93-14951

# LAUBER, ERICK

Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 N93-15968

# LAUGHERY, RON

CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180

# LAURENT, S.

Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716

# LAVECCHIA, HELENE M.

Application and validation of workload assessment techniques [AD-A264575] p 366 N93-32012

# LAVERGNE, C.

Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 N93-19708

# LAWRENCE, DALE A.

Optimizing dynamic transparency in teleoperator architectures [AAS PAPER 92-056] p 392 A93-50596

# LAWTON, T. B.

Image enhancement filters significantly improve reading performance for low vision observers p 167 A93-28723

# LAXAR, KEVIN

Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights [AD-A264626] p 341 N93-30426

# LAZARETH, OTTO W.

A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935

# LAZCANO, A.

Comets and the formation of biochemical compounds on the primitive earth - A review p 109 A93-17977

# LAZERGES, M.

Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407

# LEACH, CAROLYN S.

Metabolic changes observed in astronauts p 84 A93-17535

Changes in total body water during spaceflight p 86 A93-17548

# LEAHY, R. M.

Adaptive filters for monitoring localized brain activity from surface potential time series p 217 N93-22774

# LEAKAKOS, TINA

Biomagnetic localization from transient quasi-static events [DE93-007328] p 253 N93-25186

# LEAKAKOS, TINA

Modification of yield and chlorophyll content in leaf lettuce by HPS radiation and nitrogen treatments p 328 A93-44880

# LEAKE, STEPHEN

Recent developments at the Goddard Engineering Test Bed p 192 A93-29115

# LEARMOUNT, DAVID

Virtual landings p 410 A93-54868

# LEAS, S.

Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal p 164 A93-28699

# LEBEDEV, A. N.

Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333

# LEBEDEVA, I. M.

Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165

# LEBLANC, ADRIAN

Can the adult skeleton recover lost bone? p 93 A93-20656

Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545

# LEBLANC, ADRIAN D.

Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039

# LECROART, JEAN-LOUIS

Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044

# LEDOUX, E.

Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study p 216 A93-32786

# LEDYARD, KATHLEEN M.

Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate [NASA-CR-193278] p 330 N93-30665

# LEE, GREG

Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981

# LEE, M. G.

Sabatier carbon dioxide reduction system for Space Station Freedom [SAE PAPER 921189] p 294 A93-41368

# LEE, M. GENE

Integrated oxygen recovery system [NASA-CR-192343] p 234 N93-22663

Integrated oxygen recovery system [NASA-CR-192982] p 267 N93-26088

# LEE, MARK D.

Contextual change and skill acquisition in visual search - Does the rate of change affect performance? p 178 A93-27187

Disruption and maintenance of skilled visual search as a function of degree of consistency p 389 A93-52501

Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks [AD-A257711] p 100 N93-17684

# LEE, SUKHAN

Interactive and cooperative sensing and control for advanced teleoperation p 391 A93-49443

Intelligent sensing and control for advanced teleoperation p 409 A93-54158

Man-machine cooperation in advanced teleoperation p 366 N93-32106

Interactive and cooperative sensing and control for advanced teleoperation p 366 N93-32108

# LEE, TZE-SAN

Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model p 245 N93-26069

# LEE, W. D.

Hybrid oxygen system [AD-A262417] p 317 N93-28464

# LEGENRE, A. J.

Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155

# LEGER, A.

Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681

G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775

# LEGGE, GORDON E.

Psychophysical analyses of perceptual representations [AD-A255432] p 58 N93-14510

# LEHNERT, BRUCE E.

Potential health hazards from thermal degradation events - Particulate vs. gas phase effects [SAE PAPER 921388] p 282 A93-41546

The acute inhalation toxicity of pyrolysis products of halon 1301 [AD-A260874] p 254 N93-25629

Evaluation of NO(x)-induced toxicity [AD-A261034] p 283 N93-28122

# LEHNERT, H.

Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028

# LEHNERT, HENDRIK

Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500

# LEINENWEVER, ROGER W.

Low-cost monochrome CRT helmet display p 228 A93-30061

Low-cost color LCD helmet display p 228 A93-30062

Low-cost helmet-mounted displays [AD-A262616] p 317 N93-28479

# LEIRER, V.

Influence of aging and practice on piloting tasks p 286 A93-39708

# LEIRER, V. O.

Aging, expertise, and narrative processing p 180 A93-28724

# LEIRER, VON

The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299

# LEITER, JAMES C.

Response of genioglossus EMG activity to passive tilt in men p 279 A93-41118

# LEJUN, SHAO

Incorporating robot vision in tele-autonomous systems p 184 A93-27031

# LENNON, ROBERT L.

Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients p 88 A93-18036

# LENOROVITZ, DAVID R.

Air Traffic Control facility lighting p 188 A93-27167

# LENTZEN, R.

Mir 1992 operations and crew training p 226 N93-24352

# LEON, H. A.

Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697

# LEONG, H. M.

Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1 [AD-A254138] p 25 N93-10662

Physiological indices of mental workload [AD-A261692] p 260 N93-26391

# LEONIDA, ANDREI

A low pressure electrolyzer for the next generation submarine [SAE PAPER 921125] p 291 A93-41316

# LEONT'EV, V. G.

Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188

# LEPANTO, JANET A.

Human-in-the-loop evaluation of RMS Active Damping Augmentation [AIAA PAPER 93-3875] p 393 A93-51460

# LESKI, M. J.

Effect of spaceflight on human protein metabolism p 360 A93-47097

# LESSER, RONALD P.

Automatic detection of seizures with applications p 254 N93-25592

# LESTER, LAURIE S.

The effects of an antijet lag diet p 370 N93-32263

# LEVASHOV, M. M.

Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226

# LEVIN, S. A.

Mathematics and biology: The interface, challenges and opportunities [DE92-041207] p 82 N93-17359

# LEVINE, B.

Nifedipine for treatment of high altitude pulmonary edema [AD-A256959] p 95 N93-16187

- LEVY, B. I.**  
Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716
- LEVY, GERHARD**  
Pharmacodynamic aspects of spaceflight p 73 A93-17541
- LEWINE, J. D.**  
Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 A93-12566
- LEWIS, A. G.**  
Gravity as a factor in the orientation and vertical migration of marine zooplankton p 158 A93-21098
- LEWIS, D. H.**  
An automated version of the dichotic listening test: Hardware, software, and procedural details [AD-A258114] p 120 A93-17895
- LEWIS, EDWIN R.**  
Vestibular afferent responses to microrotational stimuli p 328 A93-44930  
Hair cell tufts and afferent innervation of the bullfrog crista ampullaris p 329 A93-44931  
Micromotional studies of utricular and canal afferents [NASA-CR-192703] p 207 A93-22800
- LEWIS, J. L.**  
Man-systems distributed system for Space Station Freedom p 312 A93-27788
- LEWIS, JOHN S.**  
Carbonaceous chondrites and the origin of life p 412 A93-55997
- LEWIS, M. L.**  
Cytokine secretion by immune cells in space p 153 A93-28694
- LEWIS, MARIAN L.**  
Materials dispersion and biodynamics project research p 207 A93-22651
- LEWIS, P. S.**  
A weighted iterative algorithm for neuromagnetic imaging [DE92-040244] p 51 A93-13522  
Biomagnetic localization from transient quasi-static events [DE93-007328] p 253 A93-25186
- LEWIS, ROBERT H.**  
Human safety in the lunar environment p 105 A93-16867
- LEWIS, S. M.**  
Fundamental diagnostic hematology: Anemia (second edition) [PB93-188662] p 338 A93-31140  
Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition) [PB93-188670] p 338 A93-31158
- LEYSSAC, PAUL P.**  
Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans p 332 A93-44180
- LEZOTTE, DENNIS C.**  
Prospective assessment of stereoscopic visual status and USAF pilot training attrition p 116 A93-24039
- LI, FEIYUE**  
Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517
- LI, FENG-ZHI**  
Effects of cold injury on serum angiotensin converting enzyme activities in rats p 199 A93-30444
- LI, NORMAN N.**  
Life support systems [AAS PAPER 91-320] p 409 A93-54308
- LI, SHU-CHUN**  
The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690  
Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435
- LI, XIANGGAO**  
Radiation dose measurement and biostack experiment in biocabin on board satellite p 327 A93-44845
- LI, XIU-WEN**  
Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435
- LI, YING-ZHONG**  
Comparison between VDV and  $a(rms)$  using simulated impulsive vibration p 91 A93-19991
- LI, ZHENJIE**  
The effects of exposure to 50 mT ELF magnetic fields for 96 h on rabbit EEG p 4 A93-13712
- LIAMIN, V. R.**  
Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238
- LIAN, L.**  
Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 A93-32261
- LIANG, LI-NUO**  
Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents [AD-A255696] p 42 A93-14557
- LIBERT, J. P.**  
Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619
- LIBLONG, BREEN**  
A monitoring and control system for complex man-machine systems: Preliminary design p 70 A93-14951
- LICHTENBERG, BYRON K.**  
Space motion sickness monitoring experiment - Spacelab 1 p 403 A93-55941  
An on-orbit viewpoint of life sciences research p 206 A93-22629
- LICINA, JOSEPH R.**  
Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308  
Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s [AD-A255691] p 52 A93-14103
- LIEBERMAN, D.**  
Identification of a critical period for motor development in neonatal rats p 157 A93-28764
- LIEBERMAN, HARRIS R.**  
Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 A93-32269
- LIEDL, KLAUS R.**  
Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792
- LIEVREMONT, M.**  
Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302
- LIGGETT, KRISTEN K.**  
3-D target designation using two control devices and an aiding technique p 408 A93-53120
- LIGHTFOOT, J. T.**  
Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686
- LILENKO, S. V.**  
Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226
- LILIENTHAL, MICHAEL G.**  
Profile analysis of simulator sickness symptoms - Application to virtual environment systems p 381 A93-49399  
Simulator sickness p 403 A93-55944
- LIM, P. Y. W.**  
Quantification of human responses p 340 A93-29564
- LIMERO, THOMAS**  
First entry operations for spacecraft [SAE PAPER 921384] p 308 A93-41542
- LIMERO, THOMAS F.**  
Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals [SAE PAPER 921410] p 310 A93-41564  
The role of Environmental Health System air quality monitors in Space Station Contingency Operations [SAE PAPER 921414] p 310 A93-41565
- LIN, CHIN**  
Overview of NASA's 1991 Life Support Systems Analysis Workshop [SAE PAPER 921118] p 290 A93-41310
- LIN, T. D.**  
Concrete lunar base investigation p 107 A93-17445
- LIN, XIAN-ZHE**  
Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster* p 1 A93-11691
- LINCOLN, WILLIAM E.**  
Flight director information and pilot performance in instrument approaches [AD-A258186] p 131 A93-17857
- LIND, JUDITH H.**  
Agent-based pilot-vehicle interfaces - Concept and prototype p 262 A93-34986  
Human factors problems for aircrew-aircraft interfaces - Where should we focus our efforts? p 264 A93-37300
- LINDBERGH, CHARLES**  
Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 A93-19759
- LINDSETH, ANN-ELISE**  
The effects of hypoxia on auditory reaction time and P300 latency p 47 A93-16156
- LINDSETH, GLENDA N.**  
Assessing for preflight predictors of airsickness p 8 A93-10335
- LINDSETH, PAUL D.**  
Assessing for preflight predictors of airsickness p 8 A93-10335
- LINTEBN, GAVAN**  
Transfer effects of scene content and crosswind in landing instruction p 62 A93-15665  
Visual augmentation and scene detail effects in flight training p 180 A93-27454
- LIPPETT, THOMAS M.**  
Large-screen-projection, avionic, and helmet-mounted displays: Proceedings of the Meeting, San Jose, CA, Feb. 26-28, 1991 [SPIE-1456] p 181 A93-26881  
Helmet-mounted displays III: Proceedings of the Meeting, Orlando, FL, Apr. 21, 22, 1992 [SPIE-1695] p 227 A93-30051
- LITOVITZ, T. A.**  
Mechanisms of microwave induced damage in biologic materials [AD-A255799] p 42 A93-14648  
Mechanisms of microwave induced damage in biologic materials [AD-A264415] p 358 A93-32035
- LITTLEFIELD, M.**  
An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137
- LITTMAN, DAVID C.**  
Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142
- LIU, ANDREW**  
Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446  
Timing considerations of Helmet Mounted Display performance p 233 A93-33449
- LIU, BAOSHAN**  
Evaluation of finger motor reaction in flyer when handling throttle and stick p 29 A93-13539
- LIU, CHENG-LIN**  
Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats p 77 A93-19994
- LIU, CHENGLIN**  
Pharmacological effects of mixture of *Eleutherococcus* (ELE) and *Eischoltzia* (ELS) p 11 A93-13710
- LIU, CHENGXIAN**  
The current status and prospects in the study of cell physiology under microgravity p 38 A93-16001
- LIU, ZHAORONG**  
Effects of oxygen on regulation of cerebral blood flow in rabbits adapted to hypoxia p 3 A93-13545
- LIU, ZUNYAO**  
Effects of positive acceleration on the microcirculation of rabbit conjunctiva, mesentery, skin, and pia mater p 4 A93-13709
- LIVIO, HANNA-LEENA**  
Biotechnical production and use of pyruvic acid with special reference to coenzyme regeneration [VTT-PUBS-77] p 209 A93-23369
- LIZZA, CARL**  
From pilot's associate to satellite controller's associate p 32 A93-11922
- LLINAS, A.**  
Identification of a critical period for motor development in neonatal rats p 157 A93-28764
- LLINAS, R. R.**  
Identification of a critical period for motor development in neonatal rats p 157 A93-28764
- LLINAS, RODOLFO R.**  
Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A256340] p 55 A93-15198  
Biophysical and biochemical mechanisms in synaptic transmitter release [AD-A264829] p 336 A93-30613
- LLOYD, CHARLES W.**  
Space medicine - Answering the challenge p 87 A93-17552  
Health maintenance facility system effectiveness testing [NASA-TM-104737] p 372 A93-32328
- LO, MICHAEL**  
SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 A93-18153
- LOBASCIO, CESARE**  
The effects of a reduced pressure scenario on the Columbus APM environmental control system [SAE PAPER 921247] p 298 A93-41418

# LOCKETT, JOHN

Environmental control of the Mini Pressurized Logistic Module  
[SAE PAPER 921281] p 302 A93-41449

## LOCKETT, JOHN

CREWCUT - A tool for modeling the effects of high workload on human performance p 178 A93-27180

## LOCKETT, JOHN F., III

CREWCUT - A new tool for predicting human performance in conceptual systems p 178 A93-27179

## LOEPKY, J. A.

Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493  
Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494

## LOEWIK, M. R. H.

An automated processing system for food frequency and nutrition knowledge questionnaire p 367 N93-32241

## LOFARO, RONALD J.

Workshop on Aeronautical Decision Making (ADM). Volume 1: Executive summary p 99 N93-16189  
[AD-A257016]

## LOFTIN, KARIN C.

The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595

## LOGINOV, V. A.

The problem of oxygen regimen in extreme conditions p 160 A93-27685

Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751

Accumulation of calcium ions in the myocardial sarcoplasmic reticulum of restrained rats exposed to a pulsed electromagnetic field p 240 A93-35225

## LOGUE, M.

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048

## LOGVINOV, S. V.

Microwaves and the visual analyzer p 250 A93-35247

## LOKTIN, G. I.

Development of K.E. Tsiolkovsky's ideas on the interaction between space, nature, and man p 90 A93-18408

## LOMBARDI, FEDERICO

Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500

## LONG, I. D.

Health services at the Kennedy Space Center p 154 A93-28711

Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712

## LONG, S.

The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO [DE92-019411] p 5 N93-11630

## LONG, S. P.

Resource capture by single leaves [DE92-015847] p 5 N93-10461

The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins [DE93-002940] p 115 N93-19751

## LONG, SHENGZHAO

Study of overall analysis method of the man-machine-environment systems p 61 A93-14413

## LONG, WALT

Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 N93-30882

## LONGBOTHAM, HAROLD

Analysis of visual loss from retinal lesions [AD-A264692] p 336 N93-30494

## LONGRIDGE, THOMAS M.

Helicopter simulation: An aircrew training and qualification perspective p 342 N93-30676

## LOOCHAN, FAREDOON K.

The prevalence of artificial lens implants in the civil airman population [DOT/FAA/AM-92/14] p 253 N93-25214

## LOOPER, LAURIE

Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277

## LOPEZ G.-COVIELLA, IGNACIO

Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate p 214 A93-32120

## LOPEZ G.-COVIELLA, I.

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048

## LORENZ, CHRISTINE H.

A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging [SAE PAPER 921253] p 298 A93-41423

## LORENZ, JUERGEN

EVA Glove Research Team [NASA-CR-193014] p 313 N93-27847

A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848

## LORENZ, GIOVANNA

Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission) p 200 A93-32071

## LORENZO, ANTONIO V.

Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500

## LORTIE, M.

Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study p 216 A93-32786

## LOSHIN, DAVID S.

Human low vision image warping - Channel matching considerations p 231 A93-32444

Design of a reading test for low vision image warping p 400 A93-53025

## LOUIS, DAVID J.

A study of illness related lost time in transport aircraft crewmembers [AD-A258193] p 132 N93-18298

## LOVESEY, E. J.

Management of avionics data in the cockpit p 147 N93-19777

## LOVETT, STAN

Explosives search dogs p 159 N93-21933

## LOVO, A.

Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243

## LOWN, BERNARD

Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500

## LOWRIE, JAMES W.

Flight Telebotonic Servicer legacy p 190 A93-29106

Flight Telebotonic Servicer legacy [AIAA PAPER 93-1157] p 231 A93-31032

## LOZOVSKAYA, E. L.

Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

## LU, Z. L.

Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 N93-26521

## LUBIN, JEFFREY

Human visual performance model for crewstation design p 182 A93-26887

Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323

## LUCAS, JOE NATHAN

Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation [DE92-018066] p 5 N93-10974

## LUCASSEN, M. P.

A spurious pop-out in visual search [AD-A256548] p 57 N93-14267

## LUCCIOLI, S.

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate p 19 N93-11306

## LUCY, D. R.

Early markers of HIV infection and subclinical disease progression p 17 N93-11296

## LUCY, DANIEL R.

Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292

## LUCK, STEPHEN

Hermes ECLSS - Main requirements and technical solutions [SAE PAPER 921400] p 309 A93-41555

## LUCOT, JAMES B.

8-OH-DPAT does not interfere with habituation to motion-induced emesis in cats p 271 A93-38451

Xylazine emesis, yohimbine and motion sickness susceptibility in the cat p 324 A93-42450

Bupirone blocks cisplatin-induced emesis in cats p 324 A93-42668

Idaverine, an M2- vs. M3-selective muscarinic antagonist, does not prevent motion sickness in cats p 327 A93-44878

## LUDEWIG, HANS

Habituation to feline motion sickness p 328 A93-44900

Neurochemistry and pharmacology of motion sickness in nonhuman species p 399 A93-55934

## LUDEWIG, HANS

A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935

## LUFT, F. C.

Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493

## LUFT, U. C.

Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493

Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494

## LUFT, V. M.

A modified method for investigating gastric secretion in aviation medical examination p 359 A93-45692

## LUJAN, BARBARA F.

Medical concerns for exploration-class missions p 386 A93-52409

## LUKEFAHR, BRENDA D.

The ECLSS advanced automation project evolution and technology assessment p 312 N93-27723

## LUMIA, RONALD

A manipulator control testbed - Implementation and applications [AAS PAPER 92-054] p 392 A93-50594

## LUNDGREN, CLAES E. G.

Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167

## LUPANDIN, YU. V.

Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism p 360 A93-46968

## LUSHCHIKOV, E. A.

The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172

## LUSTIN, S. I.

Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116

Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine p 402 A93-55332

## LUTTGES, M. W.

Design and evaluation of a payload to support plant growth onboard COMET 1 [SAE PAPER 921389] p 308 A93-41547

## LUTTGES, MARVIN W.

LIAC - A closed ecosystem research facility p 347 A93-42129

## LUZI, GIUSEPPE

Silent HIV infection p 16 N93-11293

## LY, BEBE

The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595

## LYCHAKOV, D. V.

Interlabyrinth otolithic asymmetry under normal conditions and after the effect of a gravity change p 242 A93-35264

## LYDICK, L. N.

Head-steered sensor flight test results and implications p 318 N93-28859

## LYMN, R. W.

Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568

## LYNCH, D.

Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574

## LYNCH, H. J.

Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030

## LYNCH, HARRY J.

Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate p 214 A93-32120

Melatonin in human preovulatory follicular fluid p 215 A93-32474

## LYONS, TERENCE J.

Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991 p 133 N93-19679

## LYONS, TIMOTHY

Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge [AD-A264260] p 337 N93-30894

## LYSAK, E. I.

Ozone - A new aspect of its effect on microorganisms p 398 A93-54971



## M

- MAASS, H.**  
Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972  
Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679  
Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684  
Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685  
The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686  
Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687  
Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688
- MACDONALD, S.**  
Salivary total protein and experimental Coriolis sickness p 383 A93-49573
- MACDONALD, SCOTT**  
New pharmacologic approaches to the prevention of space/motion sickness p 85 A93-17538
- MACDONALD, VICTOR W.**  
Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin [AD-A258185] p 120 N93-17900
- MACDOUGALL, J. D.**  
The effects of variations in the anti-G straining maneuver on blood pressure at  $\pm$  Gz acceleration p 118 A93-25204
- MACELROY, ROBERT D.**  
Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628
- MACHEMER, HANS**  
Short-term microgravity to isolate graviperception in cells p 111 A93-21901  
Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548
- MACHIDA, KAZUO**  
Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254  
Research of a free-flying telerobot. V - Handling a target with multi-arms p 411 A93-56255  
Skill compensation and dynamic coupling of macro/smart effector system p 411 A93-56260
- MACHO, L.**  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207
- MACK, G.**  
Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442
- MACK, GARY W.**  
Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure p 281 A93-41168
- MACKENZIE, COLIN F.**  
Development and enhancement of a model of performance and decision making under stress in a real life setting [AD-A255699] p 99 N93-16111  
Development and enhancement of a model of performance and decision making under stress in a real life setting [AD-A257796] p 123 N93-18363
- MACKO, STEPHEN A.**  
Kinetics of peptide hydrolysis and amino acid decomposition at high temperature p 411 A93-53289
- MACLEAN, S. G.**  
Machine vision in space p 395 A93-52641
- MACLIN, E.**  
Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 N93-12566
- MADER, T. H.**  
Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710
- MADER, THOMAS H.**  
Intraocular pressure in microgravity p 85 A93-17539  
Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122
- MADSEN, BROOKS C.**  
Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 N93-19399
- MAEDA, TAKASHI**  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- MAEK, SH.**  
The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242
- MAEZAWA, MIYUKI**  
Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793
- MAGEDOV, V.**  
Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706
- MAGEE, MICHAEL**  
A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever [NASA-CR-193301] p 365 N93-31844
- MAGNUSSON, MANS**  
Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis p 7 A93-10329
- MAH, ROBERT W.**  
Automation and robotics human performance [NASA-CR-193049] p 267 N93-26153
- MAHER, E. P.**  
Development of Arabidopsis thaliana grown under microgravity conditions p 211 N93-24404
- MAHER, T. J.**  
Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048  
Alanine increases blood pressure during hypotension p 203 A93-33027
- MAHON, D. R.**  
Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287
- MAIER, E.**  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367
- MAILLET, ALAIN**  
Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495
- MAIN, JOHN A.**  
A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging [SAE PAPER 921253] p 298 A93-41423  
Power assist EVA glove development [SAE PAPER 921255] p 299 A93-41425  
EVA Glove Research Team [NASA-CR-193014] p 313 N93-27847  
A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848  
A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849  
Power assist EVA glove development p 314 N93-27850
- MAIRBAEURL, HEIMO**  
Interactions between Hb, Mg, DPG, ATP, and Cl determine the change in Hb-O<sub>2</sub> affinity at high altitude p 279 A93-41117
- MAISONBLANCHE, P.**  
Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716
- MAKHANOV, M. A.**  
A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727
- MAKHNACH, A. V.**  
Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115
- MAKI, JAMES S.**  
Biodegradation of materials in water reclamation systems [SAE PAPER 921311] p 303 A93-41473
- MAKINODAN, TAKASHI**  
Cellular immunosenescence - An overview p 80 A93-20663
- MAKLETSOVA, M. G.**  
Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101
- MALACINSKI, G. M.**  
Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745  
Altering the position of the first horizontal cleavage furrow of the amphibian (Xenopus) egg reduces embryonic survival p 272 A93-39717
- MALAVASIC, M. J.**  
Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate p 19 N93-11306
- MALCONIAN, M. K.**  
Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574
- MALCONIAN, MARK K.**  
Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043
- MALHOTRA, RAVI M.**  
Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125
- MALKIMAN, I. I.**  
Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410
- MALKIN, V. B.**  
K.E. Tsiolkovsky and biomedical problems connected with space exploration; Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions p 90 A93-18406
- MALMSTROM, FREDERICK V.**  
Comparing the Cattell 16PF profiles of male and female commercial airline pilots p 178 A93-27177
- MALOWANY, A. S.**  
Teleprogramming a cooperative space robotic workcell for Space Station p 190 A93-29109
- MAN'KOV'SKA, YI. M.**  
Mechanisms of the antihypoxic effect of taurine p 325 A93-43073
- MANAHAN, MEERA K.**  
Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155
- MANCINELLI, R. L.**  
The possibility of life on Mars during a water-rich past p 196 A93-27887
- MANDERS, JULIAN H.**  
Flow cytometric analysis of lymphocyte surface markers following a 1-Gy dose of gamma radiation p 281 A93-41170
- MANDY, F.**  
The development of an automated cell culture system for use in space life science research p 158 N93-21085
- MANELFE, C.**  
Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280
- MANEV, A.**  
The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219
- MANGOLD, SUSAN J.**  
Human factors design principles for instrument approach procedure charts. Volume 1: Readability [AD-A257234] p 104 N93-15968
- MANKAMYER, MELANIE**  
Atmospheric control systems p 365 N93-31456
- MANNING, CAROL A.**  
Poststrike air traffic control trainees - Biodemographic predictors of success in selection and screening p 56 A93-15664
- MANNING, CHERYL A.**  
Suited for spacewalking: A teacher's guide with activities [NASA-EP-279] p 65 N93-13692
- MANNING, JAMES M.**  
Carboxyalkylated hemoglobin as a potential blood substitute [AD-A252329] p 22 N93-11561
- MANO, TADAOKI**  
Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328
- MANO, TAKAICHI**  
Arterial oxygen saturation during  $\pm$ Gz acceleration by short-radius centrifuge p 379 A93-49178  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- MANOJLOVIC, J.**  
Back ache in helicopter pilots p 382 A93-49566
- MANSON, THOMAS J.**  
The Servicing Aid Tool p 192 A93-29116
- MANUKHIN, B. N.**  
Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis p 39 A93-16750
- MAPOU, R. L.**  
Relating cognitive function to military aviator performance in early HIV infection p 17 N93-11298
- MAPOU, ROBERT L.**  
Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus p 130 A93-25209

## MARCONDES-NORTH, REGINA

### MARCONDES-NORTH, REGINA

Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277

#### MARCUS, B. A.

Prevention of cumulative trauma disorders [PB93-188332] p 338 N93-31138

#### MARCUS, LELAND

SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 N93-18153

#### MARGALIT, RUTH

Pseudomonas screening assay [NASA-CASE-NPO-17653-1-CU] p 245 N93-25994

#### MARILL, THOMAS

Why do we see three-dimensional objects? [AD-A259892] p 224 N93-23986

#### MARINESCU, LUCIAN

Fractures of the vertebral column after ejection p 46 A93-15575

#### MARINI, J.-F.

Effects of acute exercise on attenuated vagal baroreflex function during bed rest p 48 A93-16160

#### MARINO, JOHN

Ab initio pilot training process more efficient than traditional methods p 387 A93-49276

#### MARKHAM, R. L.

Evaluation and optimization of a flexible filtration system for respiratory protection system 21 [AD-A262467] p 284 N93-28758

#### MARKIN, A. A.

Lipid peroxidation and the antioxidant defense system in rats after a 13-day flight on the Cosmos-1887 biosatellite p 239 A93-35210

Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254

#### MARKIN, A. S.

A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite p 240 A93-35215

Turning-over reaction during free fall in labyrinthectomized rats after a flight on the Cosmos 936 biosatellite p 241 A93-35246

#### MARKOVITS, ANDREW S.

Photo-Refractive Keratectomy (PRK) - Threat or millennium for military pilots? p 401 A93-55169

#### MARMARO, G. M.

Kennedy Space Center environmental health program p 166 A93-28713

#### MARMOT, M. G.

Hypertension and the probability of an incapacitating event over a defined period - Impact of treatment p 215 A93-32777

#### MARR, M. J.

A computer-based visual analog scale [AD-A258152] p 122 N93-18280

#### MARRAS, WILLIAM S.

An improved simulation based biomechanical model to estimate static muscle loadings p 160 A93-27172

#### MARRIOTT, BERNADETTE M.

Body composition and physical performance [AD-A255627] p 69 N93-14161

#### MARSEE, R. L.

Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment) [AD-A255525] p 70 N93-14554

Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 N93-17697

#### MARSH, J. S.

Toward the ideal military aviation sunglass [AD-A258200] p 140 N93-18200

#### MARSH, R.

Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780

#### MARSH, ROBERT W.

The application of filtration technology within the Water Processor on board Space Station Freedom [SAE PAPER 921270] p 300 A93-41440

Space Station Condensing Heat Exchanger biofilm formation and control evaluation [SAE PAPER 921383] p 308 A93-41541

#### MARSHAK, WILLIAM P.

Temporal Frequency Spectrum for describing and modeling motion perception p 232 A93-33250

#### MARTEL, ADRIAN

Ergonomic development of digital map displays p 320 N93-28866

#### MARTENS, CHRISTOPHER S.

Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake p 38 A93-16544

#### MARTIN, ANTONIO MENDEZ

Trial of emergency ration of the Spanish Air Force p 368 N93-32247

#### MARTIN, C.

Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681

#### MARTIN, CHARLES E.

An overview of the dynamic predictive architecture for robotic assistants p 191 A93-29112

Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey [SAE PAPER 921350] p 306 A93-41509

#### MARTIN, DAVID

The Servicing Aid Tool p 192 A93-29116

#### MARTIN, FRED H.

Candidate technologies for the Integrated Health Management Program [NASA-CR-192520] p 217 N93-22655

#### MARTIN, PAUL

Interpretation as abduction [AD-A259608] p 225 N93-24227

#### MARTIN, WAYNE L.

Human stereopsis p 223 A93-30456

Developing virtual cockpits p 145 N93-19764

#### MARTYNOVA, M. A.

Ozone - A new aspect of its effect on microorganisms p 398 A93-54971

#### MARU, RURIKO

Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179

#### MASADI, ROGER

Evaluation of two microclimate cooling air vests on a heated mannequin [AD-A259410] p 194 N93-21269

#### MASHINSKI, A. L.

The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410

#### MASLENNIKOV, V. G.

Altitude stress and cosmonaut training p 262 A93-35235

#### MASLEY, AMY S.

A study of the effects of lens focal length on remote driver performance [AD-A263191] p 321 N93-28941

#### MASLOVA, E. P.

Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226

#### MASTRO, A. M.

Variable lymphocyte responses in rats after space flight p 154 A93-28704

#### MASTRO, ANDREA M.

Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934

#### MATHE, D.

Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567

#### MATHIS, ROBERT E.

Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292

#### MATIN, LEONARD

Visual perception of elevation [AD-A261394] p 259 N93-26307

#### MATOS, P.

Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal p 164 A93-28699

#### MATOUR, DEBORAH

Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662

#### MATRICARDI, P. M.

Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303

The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312

#### MATRICARDI, PAOLO M.

Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305

#### MATSON, JACK E.

Development of a prototype interactive learning system using multi-media technology for mission independent training program p 100 N93-17310

#### MATSON, W. R.

Reit syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697

#### MATSUDA, GENICHI

Contribution of psychiatry to life in space p 56 A93-15529

#### MATSUHIRA, NABUTO

Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254

#### MATSUI, NOBUO

Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029

#### MATSUMOTO, K.

Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762

#### MATSUMOTO, KOHTARO

Design of a display system for a human pilot's supervisory tasks p 27 A93-11201

Telemanipulation experiment using predictive display p 411 A93-56256

#### MATSUNAGA, T.

Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711

Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712

#### MATSUNO, KOICHIRO

Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793

#### MATTHEWS, CLIFFORD N.

Dark matter in the solar system - Hydrogen cyanide polymers p 110 A93-17987

#### MATTHEWS, GERALD

Cognitive predictors of vigilance p 287 A93-40771

#### MATUS, V. K.

Ozone - A new aspect of its effect on microorganisms p 398 A93-54971

#### MATUSOF, RON

Acoustical and vibratory stimuli interdependencies and their applications in simulation and cue synchronization [AIAA PAPER 93-3562] p 406 A93-52662

#### MATYUF, MARGARET M.

Behavioral validation of a hazardous thought pattern instrument p 176 A93-27142

#### MAUZERALL, DAVID

Photo and thermal reactions of ferrous hydroxide p 269 A93-36561

#### MAY, BRADLEY W.

A progressive resistance weight training program designed to improve the armor crewman's strength [AD-A255553] p 53 N93-14556

#### MAY, L. L.

Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388

#### MAYBURY, MARK T.

Intelligent virtual interfaces for telerobotics p 193 A93-29136

#### MAYR, B.

27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696

#### MAYS, M. Z.

Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 N93-12145

Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 N93-24021

#### MAZURCZAK, J.

System for generating dynamic video imagery for human factors research [AD-A248675] p 31 N93-11743

#### MAZURIN, YU. V.

The limits of human impact acceleration tolerance [AIAA PAPER 93-3572] p 400 A93-52692

#### MCADAMS, DANIEL A.

Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806

Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018

#### MCADAMS, T.

Space habitat contaminant growth models. II p 345 A93-42094

#### MCANULTY, D. M.

An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 N93-12509

#### MCANULTY, D. M.

Human factors research in aircrew performance and training: 1986-1991 [AD-A254455] p 63 N93-12609

The effects of superimposing symbology on a simulated night vision goggle display [AD-A263458] p 354 N93-30590

#### MCARTHUR, J. R.

Fundamental diagnostic hematology: Anemia (second edition) [PB93-188662] p 338 N93-31140

## PERSONAL AUTHOR INDEX

- Fundamental diagnostic hematology: The bleeding and clotting disorders (second edition)  
[PB93-188670] p 338 N93-31158
- MCBEATH, MICHAEL K.**  
Perceptual bias for forward-facing motion p 339 A93-44940
- MCBRINE, JOHN J.**  
Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition  
[NASA-TP-3297] p 149 N93-20319
- MCCAIN, P. J.**  
Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824
- MCCALLUM, MARK E.**  
Time stress measurement devices for enhancement of onboard bit performance p 144 N93-19762
- MCCANN, ROBERT S.**  
Locus of the single-channel bottleneck in dual-task interference p 55 A93-14098  
The role of spatial attention in visual word processing p 339 A93-44922
- MCCARDIE, A. H.**  
An automated version of the dichotic listening test: Hardware, software, and procedural details  
[AD-A258114] p 120 N93-17895  
A computer-based visual analog scale  
[AD-A258152] p 122 N93-18280
- MCCARTHY, J.**  
Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training  
[AD-A261059] p 267 N93-26229
- MCCAULEY, M. E.**  
The accelerative stimulus for motion sickness p 410 A93-55938
- MCCAULEY, MICHAEL E.**  
Spatial orientation and dynamics in virtual reality systems - Lessons from flight simulation p 178 A93-27185  
Cybersickness - Perception of self-motion in virtual environments p 381 A93-49402  
Motion and human performance p 406 A93-55949  
A demonstration of motion base design alternatives for the National Advanced Driving Simulator  
[NASA-TM-103881] p 236 N93-24490  
Autonomic physiological data associated with simulator discomfort  
[NASA-CR-177609] p 222 N93-24738
- MCCAULLEY, JAMES B.**  
Two techniques for measuring locomotion impact forces during zero G  
[NASA-TP-3305] p 217 N93-23410
- MCCLEEREY, MICHELLE**  
Gloved operator performance study  
[AD-A256894] p 104 N93-16048
- MCCLOSKEY, KATHY**  
Individual differences and subgroups within populations - The shopping bag approach p 136 A93-24050  
Methods for test and evaluation of night vision goggle integrated helmets p 188 A93-27182
- MCCORMACK, A.**  
Tests characterizing bioprocessor hardware for analytical modeling  
[SAE PAPER 921357] p 307 A93-41516
- MCCORMACK, ANN**  
Techniques for optimal crop selection in a controlled ecological life support system  
[NASA-TM-103950] p 33 N93-12018
- MCCORMACK, ANN C.**  
Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models  
[SAE PAPER 921355] p 306 A93-41514
- MCCORMICK, ARTHUR K., III**  
Air Handling and Atmosphere Conditioning systems for manned spacecraft - A design and performance data survey  
[SAE PAPER 921350] p 306 A93-41509
- MCCORMICK, DAVE**  
Quick-disconnect harness system for helmet-mounted displays p 228 A93-30065
- MCCORMICK, M.**  
Metabolic factors influencing myocardial recovery from acidosis (CiC3)  
[AD-A252376] p 14 N93-10796
- MCCRARY, BRIAN F.**  
Ethical concerns in the practice of military aviation medicine p 89 A93-18045
- MCCRAY, SCOTT B.**  
Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air  
[SAE PAPER 921321] p 304 A93-41483  
A novel membrane device for the removal of water vapor and water droplets from air  
[SAE PAPER 921322] p 304 A93-41484
- MCCUAIG, K.**  
Aseptic technique in microgravity p 168 A93-28737
- MCCUAIG, K. E.**  
Management of trauma and emergency surgery in space p 167 A93-28734
- MCCUE, SAMUEL**  
Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression p 327 A93-44184
- MCCUE, SAMUEL A.**  
Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs p 326 A93-44183
- MCCULLOUGH, ROBERT E.**  
Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121
- MCCULLOUGH, ROSANN G.**  
Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121
- MCDANIEL, ROBERT L.**  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265  
Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268
- MCDONALD, K. S.**  
Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity p 377 A93-49294
- MCDONALD, M. P.**  
Baroreflex function and cardiac structure with moderate endurance training in normotensive men p 332 A93-44182
- MCDONALD, MARCIA L.**  
Using tactile information in telerobotics p 138 A93-25482
- MCDUGALL, SKYE**  
Cellular immunosenescence - An overview p 80 A93-20663
- MCDOWELL, EDWARD D.**  
Man-machine interface with simulated automatic target recognition systems p 147 N93-19781
- MCLEROY, J. F.**  
SPE water electrolyzers in support of the lunar outpost p 315 N93-27977
- MCLEROY, JAMES F.**  
A low pressure electrolyzer for the next generation submarine  
[SAE PAPER 921125] p 291 A93-41316
- MCENTIRE, B. J.**  
Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308  
An automated method for determining mass properties  
[AD-A259924] p 236 N93-24441
- MC EWEN, GARY**  
Psychiatric diagnoses aboard an aircraft carrier p 57 A93-16162
- MCFADDEN, CARL D.**  
Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package  
[SAE PAPER 921122] p 291 A93-41314  
Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package  
[SAE PAPER 921354] p 306 A93-41513
- MCFARLANE, CRAIG**  
Anatomy and physiology of plant conductive systems  
[PB93-156032] p 245 N93-25877
- MCFAYDEN, G. M.**  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070
- MCFETERS, GORDON A.**  
Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight  
[SAE PAPER 921232] p 297 A93-41406
- MCGAUGH, JAMES L.**  
Analysis of neural systems involved in modulation of memory storage  
[AD-A262418] p 283 N93-27654
- MCGHEE, JERRY R.**  
Lunar base thermal management/power system analysis and design p 315 N93-27985
- MCGLYNN, S. P.**  
A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019917] p 40 N93-13034
- A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019916] p 40 N93-13083
- MCGOWAN, GREG**  
Training effectiveness assessment: Where are we? p 342 N93-30679
- MCILWAIN-AXTEN, CAROL J.**  
An analytical model of the aircrew oxygen breathing system p 137 A93-25123
- MCKAY, A. J.**  
Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775
- MCKAY, C. P.**  
The possibility of life on Mars during a water-rich past p 196 A93-27887
- MCKAY, CHRISTOPHER P.**  
Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877  
Mars: A reassessment of its interest to biology p 113 N93-18550
- MCKAY, TIM**  
Display format and highlight validity effects on search performance using complex visual displays p 187 A93-27160
- MCKEE, JAMES W.**  
The ECLSS advanced automation project evolution and technology assessment p 312 N93-27723
- MCKEE, SUZANNE**  
Visual processing of object velocity and acceleration  
[AD-A261048] p 265 N93-25778
- MCKELVIE, R. S.**  
The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204
- MCKENZIE, IAN**  
Incidence of cardiac dysrhythmias occurring during centrifuge training p 384 A93-52297
- MCKEON, PATRICK S.**  
Air Traffic Control facility lighting p 188 A93-27167
- MCKIBBEN, MARK**  
A study of the effects of micro-gravity on seed germination p 40 N93-13167
- MCKINLEY, B. A.**  
The clinical chemistry and immunology of long-duration space missions p 169 A93-28754
- MCKINNEY, EARL H., JR.**  
Flight leads and crisis decision-making p 404 A93-55161
- MCLAUCHLAN, PHILIP F.**  
A modular head/eye platform for real-time reactive vision  
[OUEL-1941/92] p 320 N93-28897
- MCLEAN, GARNET**  
Comparison of portable crewmember protective breathing equipment (CPBE) designs  
[DOT/FAA/AM-93/6] p 310 N93-27121
- MCLEAN, GARNET A.**  
Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft  
[AD-A253648] p 31 N93-11279
- MCLEAN, J.**  
The development of an automated cell culture system for use in space life science research p 158 N93-21085
- MCLELLAN, T. M.**  
Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing p 389 A93-49218  
Continuous vs. intermittent work with Canadian forces NBC clothing p 389 A93-49219
- MCMAHON, THOMAS A.**  
Energetics of walking and running - Insights from simulated reduced-gravity experiments p 116 A93-21687
- MCMANIS, SUSAN E.**  
Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function p 18 N93-11299
- MCNEESE, MICHAEL D.**  
Computer-supported collaborative work - A new agenda for human factors engineering p 348 A93-42841
- MCPHERSON, A.**  
Effects of a microgravity environment on the crystallization of biological macromolecules p 357 A93-45995
- MCVEY, D. S.**  
Effects of antithrostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693
- MEANS, ROBERT W.**  
Neural network retinal model real time implementation  
[AD-A255652] p 52 N93-14210
- MEDIONI, GERARD**  
3-D surface description from binocular stereo p 61 A93-14727

**MEDVEDEV, O. S.**

Dynamics of the central and peripheral circulation of active rats on the first day of antihypothetic hypokinesia (The role of training) p 242 A93-35261

**MEDVEDOVSKY, C.**

Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784

**MEEHAN, R. T.**

Alteration in human mononuclear leucocytes following space flight p 165 A93-28705  
Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710

**MEEHAN, RICHARD T.**

Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122

Immunology presentation at the 1990 NASA/NSF Antarctica Biomedical Science Working Group p 81 A93-16806

**MEISEL, SIMCHA**

Acute hypertensive response to +Gz acceleration in mildly hypertensive pilots p 386 A93-52307

**MEISTER, R.**

Mechanisms of microwave induced damage in biologic materials [AD-A255799] p 42 A93-14648

**MEJGAL, A. YU.**

Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism p 360 A93-46968

**MEL'NIK, S. G.**

Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel p 257 A93-36744

**MEL'NIKOV, L. N.**

K.E. Tsiolkovsky on the problem of human survival in extreme environments (On the earth and in space) p 77 A93-18407

**MELCHER, G. P.**

Early markers of HIV infection and subclinical disease progression p 17 A93-11296

**MELCHIOR, FRANCOIS M.**

Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance p 280 A93-41119

**MELESHKO, G. I.**

The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410

**MELLERSH, A. R.**

A model for the prebiotic synthesis of peptides which throws light on the origin of the genetic code and the observed chirality of life p 412 A93-56000

**MELOT, CHRISTIAN**

Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188

**MELTON, J. E.**

Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia p 79 A93-20038

**MELZER, JAMES E.**

Color helmet display for the tactical environment - The pilot's chromatic perspective p 227 A93-30058

**MENAKER, MICHAEL**

Control and circadian behavior by transplanted suprachiasmatic nuclei [AD-A264553] p 335 A93-30382

**MENCHUKOV, O. N.**

Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228

**MENDOZA-GOMEZ, C. X.**

Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824

**MENDOZA-GOMEZ, CELIA X.**

Laboratory simulation of organic grain mantles p 268 A93-36554

**MENDZHERITSKII, A. M.**

Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain p 77 A93-18300

**MENDZHERITSKIJ, A. M.**

Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

**MENENDEZ, V.**

Development of a 500 hPa shoulder joint for the European EVA Space Suit System [SAE PAPER 921257] p 299 A93-41427

**MENG, JING-RUI**

The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690

**MENG, JINGRUI**

Changes of REG during 4h head-down bed-rest p 46 A93-16075

Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness p 327 A93-44842

**MENG, YUNYU**

Experimental research of the temperature and humidity control system for manned spacecraft cabin p 10 A93-13529

**MENKES, ALEX M.**

Automated system for analyzing the activity of individual neurons p 173 A93-22163

**MENON, P. K. A.**

Comment on 'Optimum vehicle acceleration profile for minimum human injury' by C. P. Hatsell p 392 A93-49607

**MENU, J. P.**

Cognitive factors in the air events of the Air Force during the last decade p 134 A93-19682

**MERHAY, S. J.**

Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 A93-27177

**MERKEL, L.**

Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037

**MERKEL, PHILIP A.**

From pilot's associate to satellite controller's associate p 32 A93-11922

**MERKER, H. J.**

The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556

**MERLE, LILIANE**

Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560

**MERLE, YVES**

Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560

**MERRICK, V. K.**

Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions [AIAA PAPER 92-4233] p 28 A93-13331

**MERRITT, JOHN O.**

Stereoscopic displays and applications III; Proceedings of the Meeting, San Jose, CA, Feb. 12, 13, 1992 [SPIE-1669] p 408 A93-53119

A low cost helmet-mounted camera/display system for field testing teleoperator tasks p 408 A93-53122

**MERRY, R. T.**

Electroencephalogram epileptiform abnormalities in candidates for aircrew training p 170 A93-28757

**MERTENS, HENRY W.**

Validity of clinical color vision tests for air traffic control specialists [AD-A258219] p 123 A93-18301

**MESCHER, ANTHONY L.**

Nerves and tissue repair [AD-A255299] p 53 A93-14535

**MESSINGER, A. J.**

Design guide for the ergonomic aspects of helicopter crew seating [ISVR-TR-209] p 65 A93-13464

**MEWHINNEY, JAMES A.**

Beryllium toxicity - An update p 104 A93-20779

**MEYER, G.**

Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972

**MEYER, L. G.**

A review of models of the human temperature regulation system [AD-A258023] p 120 A93-17918

**MEYER, M.**

Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682

The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686

**MEYER, M. I.**

Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683

**MEYER, P.**

The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555

**MEYLOD, JOHN**

Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167

**MEZIDOVA, KH. A.**

Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis p 39 A93-16750

**MEZZAROMA, IVANO**

Silent HIV infection p 16 A93-11293

**MIAN, ARSHAD**

Dark cycle monitoring of biological specimens on Space Station Freedom [SAE PAPER 921393] p 274 A93-41551

**MIAO, ADAM X.**

Multistage integration model for human egomotion perception [AIAA PAPER 93-3564] p 406 A93-52664

**MICHALEK, JOEL E.**

Immunological parameters in current and former US Air Force personnel p 16 A93-11295

**MICHALOPOULOU, S.**

Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 A93-11318

Lipidemic profile of Hellenic Airforce officers p 362 A93-32250

**MICHEL, C. M.**

Duration of alpha suppression increases with angle in a mental rotation task [AD-A261592] p 260 A93-26435

**MICOCCHI, ANGELO**

Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 A93-25736

**MIDDELBERG, JAN**

Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072

**MIDKIFF, ALAN**

Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377

**MIDORIKAWA, Y.**

CELSS nutrition system utilizing snails p 394 A93-52411

**MIDORIKAWA, YOSHINORI**

A trade study method for determining the design parameter of CELSS subsystems [SAE PAPER 921198] p 295 A93-41374

**MIETUS, J.**

Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049

**MIGNET, M.**

Fires on board aircraft: Toxicological risk in flight p 126 A93-19694

**MIGNON, GEORGE**

Closed ecological systems: From test tubes to Earth's biosphere p 315 A93-27976

**MIKELL, A. T., JR.**

Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 A93-12966

**MIKHALEVA, I. I.**

Vagotropic effects of peptides isolated from the brain of hibernating sustiks p 38 A93-16749

Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

**MIKI, K.**

Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281

**MIL'KOV, A. A.**

Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel p 359 A93-45691

**MILBURN, NELDA J.**

Validity of clinical color vision tests for air traffic control specialists [AD-A258219] p 123 A93-18301

**MILGRAM, PAUL**

A telerobotic virtual control system p 183 A93-27030

**MILIUTINA, N. P.**

Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

**MILLARD-STAFFORD, MINDY L.**

Monitoring core temperature during exercise - Ingestible sensor vs. rectal thermistor p 394 A93-52309

**MILLARD, DOUGLAS L.**

Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air [SAE PAPER 921321] p 304 A93-41483

**MILLER, ADAM M.**

Computer modeling of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921354] p 306 A93-41513

- Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design [SAE PAPER 921356] p 307 A93-41515
- MILLER, CAROLYN L.**  
Recovering potable water from wastewater in space platforms by lyophilization [SAE PAPER 921323] p 304 A93-41485  
Extraction of potable water from urine for space applications p 345 A93-42121
- MILLER, CHRISTOPHER R.**  
Passive zero-gravity leg restraint [NASA-CASE-ARC-11882-1-CU] p 70 N93-14713
- MILLER, DONNA J.**  
Hybrid 2 and hybrid 3 dummy neck properties for computer modeling [AD-A255544] p 66 N93-13874
- MILLER, EDWARD A.**  
A paradigm shift in Air Force medicine [AD-A258334] p 121 N93-18159
- MILLER, J. H.**  
Radiation damage to DNA [DE92-015760] p 5 N93-10834
- MILLER, JAMES C.**  
A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 N93-24490  
Autonomic physiological data associated with simulator discomfort [NASA-CR-177609] p 222 N93-24738
- MILLER, JAMES GRIER**  
Applications of living systems theory to life in space p 105 N93-16865
- MILLER, K. P.**  
Success rate analysis of Navy SERGRAD Flight Training p 56 A93-16152
- MILLER, KAREN**  
Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 N93-30882
- MILLER, MARK R.**  
Structured interviews for pilot selection - No incremental validity p 286 A93-39572
- MILLER, MARK S.**  
LIAC - A closed ecosystem research facility p 347 A93-42129  
Autonomous support for microorganism research in space [NASA-CR-192062] p 83 N93-17780
- MILLER, MICHAEL L.**  
Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259
- MILLER, R. V.**  
Ground based simulation in test and evaluation education [AIAA PAPER 92-4066] p 24 A93-11252
- MILLER, ROBERT E., II**  
Night vision manual for the flight surgeon [AD-A257059] p 104 N93-15710
- MILLER, STANLEY L.**  
Comment on 'Summary and implications of reported amino acid concentrations in the Murchison meteorite' by E. L. Shock and M. D. Schulte p 412 A93-53294
- MILLS, T.**  
Comets and the formation of biochemical compounds on the primitive earth - A review p 109 A93-17977
- MILLS, THOMAS M.**  
Europa: Prospects for an ocean and exobiological implications p 113 N93-18552
- MINASIAN, S. M.**  
The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863
- MINER, JUDSON C.**  
Immunological parameters in current and former US Air Force personnel p 16 N93-11295
- MING, D. W.**  
Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost p 346 A93-42124
- MING, DOUGLAS W.**  
Active synthetic soil [NASA-CASE-MS-C-21954-1-NP] p 114 N93-19054
- MINTON, SILVIA**  
The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test [SAE PAPER 921269] p 300 A93-41439
- MIQUEL, JAIME**  
An overview of gravitational physiology [NASA-TM-102849] p 35 N93-12319
- MIRABILE, CHARLES S., JR.**  
Motion sickness susceptibility and behavior p 405 A93-55948
- MISCONI, N. Y.**  
Studies of a laser/nuclear thermal hardened body armor [AD-A255128] p 34 N93-12423
- MISHANKIN, B. N.**  
Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan [FOA-B-40421-4.4] p 275 N93-28200
- MISHRA, S. K.**  
A microfermentation test for the rapid identification of yeasts p 156 A93-28733  
Microbiology operations and facilities aboard restructured Space Station Freedom [SAE PAPER 921213] p 296 A93-41389  
Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390  
Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391
- MITANI, KENJI**  
Experimental and theoretical study on membrane distillation using thermopervaporation [SAE PAPER 921397] p 309 A93-41554
- MITCHELL, CARY A.**  
Biomass productivity and sustainability of a bioregenerative life-support system [SAE PAPER 921359] p 307 A93-41518  
Stimulation of lettuce productivity by manipulation of diurnal temperature and light p 327 A93-44879  
Modification of yield and chlorophyll content in leaf lettuce by HPS radiation and nitrogen treatments p 328 A93-44880  
Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce p 357 A93-46468  
Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation p 357 A93-46469  
Minitron II system for precise control of the plant growth environment p 357 A93-46470  
The Minitron system for growth of small plants under controlled environment conditions p 358 A93-46471  
Effects of CO<sub>2</sub> and photosynthetic photon flux on yield, gas exchange and growth rate of *Lactuca sativa* L. 'Waldmann's Green' p 397 A93-52723
- MITCHELL, CHRISTINE M.**  
Human-computer cooperative problem solving in satellite ground control p 188 A93-27163  
Cognitive engineering models in space systems [NASA-CR-192001] p 141 N93-18517
- MITCHELL, HEATHER K.**  
Chloroflexus aurantiacus and ultraviolet radiation - Implications for Archean shallow-water stromatolites p 400 A93-55999
- MITCHELL, JENNIFER A.**  
A comparison of two scoring procedures with the NASA task load index in a simulated flight task p 349 A93-42849
- MITCHELL, NANCY B.**  
Selecting Space Station Freedom hardware p 188 A93-27184
- MITCHELL, R. E.**  
Aviation medicine research: A historical review [AD-A258198] p 121 N93-18217
- MITCHELL, RALPH**  
Biodegradation of materials in water reclamation systems [SAE PAPER 921311] p 303 A93-41473
- MITCHELL, RICHARD B.**  
Intelligent virtual interfaces for telerobotics p 193 A93-29136
- MITSUYA, AKIRA**  
Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot [AIAA PAPER 93-3863] p 392 A93-51449
- MITTELMAN, MARC W.**  
Biofilm ecology of bioluminescent bacteria [AD-A255282] p 42 N93-14532
- MITTELMAN, MICHAEL H.**  
Contact lenses in aviation - The Marine Corps experience p 289 A93-41172
- MIWA, CHIHIRO**  
Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328
- MIYACHI, MOTOHIKO**  
Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898
- MIYAMOTO, AKIRA**  
The cardiovascular system p 46 A93-15530
- Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220
- MIYAMOTO, NORIHIRO**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029
- MIYAO, M.**  
Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762
- MIZUKOSHI, K.**  
Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572  
Salivary total protein and experimental Coriolis sickness p 383 A93-49573
- MIZUMOTO, CHIEKO**  
The effect of G-experience on heart rate during +Gz loading p 333 A93-45322
- MIZUMOTO, KIYOSHI**  
Psychophysiological study on the effects of co-existence of lines for detecting dot target p 405 A93-55330
- MODI, V. J.**  
On the control of a class of flexible manipulators using feedback linearization approach p 231 A93-31533
- MODIN, A. IU.**  
Hemodynamic status of humans during a graded orthostatic test p 248 A93-35221  
Altitude stress and cosmonaut training p 262 A93-35235
- MOE, LINDA**  
Factors that affect depth perception in stereoscopic displays p 230 A93-30455
- MOELLER, C. L.**  
Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 N93-13449
- MOFFITT, KIRK W.**  
Color helmet display for the tactical environment - The pilot's chromatic perspective p 227 A93-30058
- MOGFORD, RICHARD H.**  
The air traffic controller's mental model and its implications for equipment design and trainee selection p 341 N93-30322
- MOHLER, STANLEY R.**  
Operational medicine on the lunar base p 48 A93-17430
- MOHR, R. K.**  
Mechanisms of microwave induced damage in biologic materials [AD-A255799] p 42 N93-14648
- MOLEVA, E. B.**  
Dynamics of the central and peripheral circulation of active rats on the first day of antihypostatic hypokinesia (The role of training) p 242 A93-35261
- MOLINA, E. A.**  
A computer-based visual analog scale [AD-A258152] p 122 N93-18280
- MOLINA, T. C.**  
A microfermentation test for the rapid identification of yeasts p 156 A93-28733
- MOLINE, MARGARET**  
The effects of an antijet lag diet p 370 N93-32263
- MOLINO, JOHN A.**  
Evaluating robot procedures and tasks for the flight telerobotic servicer p 187 A93-27156
- MOLLARD, R.**  
An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle p 170 A93-28758  
Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267
- MOLLOY, ROBERT**  
Performance consequences of automation-induced 'complacency' p 286 A93-39571  
Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts [AD-A254381] p 64 N93-12860
- MOLNAR, D. E.**  
Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757
- MOLVAER, O. I.**  
Vestibular problems in diving and in space p 169 A93-28747
- MONEY, K.**  
Aimed arm movements under changed gravity p 193 N93-21113
- MONEY, KENNETH E.**  
Accuracy of aimed arm movements in changed gravity p 56 A93-16159  
Alterations of proprioceptive function in the weightless environment p 86 A93-17549  
Motion sickness and evolution p 399 A93-55930  
Space motion sickness monitoring experiment - Spacelab 1 p 403 A93-55941

- MONK, DONALD L.**  
Human performance data visualization for system design teams p 348 A93-42840
- MONK, JOHN M.**  
A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks p 367 N93-32151
- MONK, TIMOTHY H.**  
Sleep and circadian rhythms p 94 A93-20659
- MONNIN, KIMBERLY A.**  
Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats p 323 A93-42192
- MONTAIN, SCOTT J.**  
Influence of graded dehydration on hyperthermia and cardiovascular drift during exercise p 44 A93-14971
- MONTAZER, M. A.**  
The effect of roll-stabilized sensor information on pilot performance p 175 A93-27130
- MONTEMERLO, M. D.**  
NASA's telerobotics research program p 263 A93-35566
- MONTGOMERY, L. D.**  
Cortical localization of cognitive function by regression of performance on event-related potentials p 9 A93-10337
- MONTGOMERY, R. W.**  
Cortical localization of cognitive function by regression of performance on event-related potentials p 9 A93-10337
- MONTGOMERY, RAYMOND C.**  
Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms p 101 A93-18710
- MONTOYA, RICHARD**  
Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161
- MOORE-EDE, M. C.**  
Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706
- MOORE, ALAN D., JR.**  
Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females [NASA-TP-3298] p 128 N93-20318
- MOORE, G.**  
Cases from the aerospace medicine residents' teaching file: Case No.52 - A flyer with syncope (clinical conference) p 168 A93-28740
- MOORE, GARY T.**  
Lunar base requirements for human habitability p 345 A93-41995  
Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 N93-18156  
GENESIS 2: Advanced lunar outpost p 352 N93-29760
- MOORE, HOMER J.**  
Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures [AD-A264179] p 336 N93-30882
- MOORE, KEVIN C.**  
Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom [SAE PAPER 921216] p 296 A93-41392
- MOORE, LORNA G.**  
Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m. p 280 A93-41121
- MOORE, NATHAN R.**  
A study to explore locomotion patterns in partial gravity environments [SAE PAPER 921157] p 293 A93-41340  
An analysis of human performance in simulated partial-gravity environments p 347 A93-42173
- MOORE, ROBERT Y.**  
Organization of the human circadian system [AD-A264675] p 361 N93-32015
- MORALEZ, E., III**  
Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions [AIAA PAPER 92-4233] p 28 A93-13331
- MORAWSKI, JANUSZ**  
On cockpit (crew) resource management p 223 A93-31490
- MORAWSKI, JANUSZ M.**  
Information management problems and their influence on cockpit equipment architecture of transport aircraft p 223 A93-31491
- MOREAU, J.**  
Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots p 401 A93-55163

- MOREY, JOHN C.**  
Attention factors associated with head-up display and helmet-mounted display systems [AD-A260204] p 235 N93-24001
- MORGENTHAUER, G. W.**  
Space habitat contaminant growth models. II p 345 A93-42094
- MORGENTHAUER, GEORGE W.**  
NASA Specialized Center for Research and Training (NSCORT) in space environmental health [SAE PAPER 921358] p 307 A93-41517  
Lunar base pressure, O<sub>2</sub> fraction, and ExtraHabitat Activity suit design p 346 A93-42125
- MORGENTHAUER, MATTHEW K.**  
Real time proximity cues for teleoperation using model based force reflection p 184 A93-27033
- MORGUN, V. V.**  
Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333
- MORI, SHIGEO**  
Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398
- MORIARTY, DEBRA M.**  
Establishing laboratory standards for biological flight experiments [NASA-CR-184402] p 40 N93-12901
- MORIKAWA, KAZUNORI**  
Perceptual bias for forward-facing motion p 339 A93-44940
- MORITA, D. M.**  
Utilization of high energy electron beam in the treatment of drinking and waste water [DE92-642335] p 372 N93-32406
- MORITA, M.**  
Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711  
Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712
- MORK, MICHAEL R.**  
Prevalence of corrective lens wear in Royal Australian Air Force flight crews p 289 A93-41173
- MORONEY, WILLIAM**  
An evaluation of miniaturized aircraft keyboards p 348 A93-42844
- MORONEY, WILLIAM F.**  
A comparison of two scoring procedures with the NASA task load index in a simulated flight task p 349 A93-42849
- MOROZ, D. E.**  
The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204
- MOROZ, J. S.**  
The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204
- MOROZOV, G. B.**  
Study of the functioning of the central and the peripheral contours of the thermoregulation system using a thermophysical model of the rabbit body p 111 A93-23075  
The efficiency of thermoregulatory responses in the cooling of the organism p 325 A93-43136
- MORRIS, ANDREW**  
Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A268862] p 350 N93-29471
- MORRISON, C.**  
Nutritional assessment of United States tactical air command pilots p 367 N93-32242
- MORRISON, D. R.**  
Cytokine secretion by immune cells in space p 153 A93-28694
- MORRISON, DENNIS R.**  
Measuring the metastatic potential of cancer cells p 244 N93-25566
- MORRISON, JEFFREY G.**  
Complex task performance as a basis for developing cognitive engineering guidelines in adaptive automation p 186 A93-27148  
Human performance in complex task environments: A basis for the application of adaptive automation [AD-A255067] p 35 N93-12486  
The effects of display and response codes on information processing in an identification task [AD-A259531] p 234 N93-23451
- MORROW, D.**  
Influence of aging and practice on piloting tasks p 286 A93-39708
- MORROW, D. G.**  
Aging, expertise, and narrative processing p 180 A93-28724
- MORROW, DANIEL**  
The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299

- MORROW, R. C.**  
A matrix-based porous tube water and nutrient delivery system [SAE PAPER 921390] p 309 A93-41548  
Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997
- MORSE, DAVID**  
Two circadian oscillators in one cell p 239 A93-34518
- MORSE, STEPHEN E.**  
Interpupillary and vertex distance effects on field-of-view and acuity with ANVIS [AD-A261259] p 268 N93-26265
- MORTIER, N.**  
Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF) p 21 N93-11316
- MORTIMER, A.**  
The development of an automated cell culture system for use in space life science research p 158 N93-21085
- MORTIMER, ALAN**  
Space life sciences overview p 158 N93-21074
- MORUKOV, B. V.**  
Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypostatic hypokinesia p 170 A93-28760
- MOSER, M.**  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367
- MOSHER, J. C.**  
Biomagnetic localization from transient quasi-static events [DE93-007328] p 253 N93-25186
- MOSIER, GARY E.**  
Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator p 407 A93-53038
- MOSSAHEB, M.**  
Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363
- MOUNIER, Y.**  
Functional adaptation of different rat skeletal muscles to weightlessness p 377 A93-49575
- MOYER, M. P.**  
Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765
- MOZO, BEN T.**  
Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 N93-29406
- MRAZ, P. J.**  
Shape optimization of tibial prosthesis components [NASA-CR-191123] p 246 N93-27085
- MUDGETT, PAUL D.**  
Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water [SAE PAPER 921268] p 300 A93-41438  
Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472
- MUELLER, C.**  
AUDIMIR - Directional hearing at microgravity p 159 A93-26570  
Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 N93-24366
- MUELLER, CH.**  
OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571
- MUELLER, MANFRED W.**  
Group II intron RNA catalysis of progressive nucleotide insertion - A model for RNA editing. p 398 A93-55292
- MUGNIER, C. J.**  
A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672
- MUIGG, A.**  
Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362
- MUKAI, CHIAKI**  
Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530
- MUKAI, CHIAKI N.**  
Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547
- MUKHERJEE, P.**  
Heterogeneity of rat pituitary prolactin cells - Relationships among location, hormone assay and estrous cycle stage p 358 A93-46606
- MUKHERJEE, PINKU**  
Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934



- MULLER, J.**  
Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684
- MULLIGAN, JEFFREY B.**  
Anisotropy in an ambiguous kinetic depth effect p 55 A93-14097
- MULTER, JORDAN**  
Instrument-approach-plate design considerations for displaying radio frequencies p 289 A93-39574
- MULVAGH, SHARON L.**  
Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551
- MUNOZ, KATHRYN A.**  
Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179
- MUNSON, R.**  
The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259
- MURAI, TADASHI**  
Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220
- MURAKAMI, AKIRA**  
Short-term microgravity to isolate graviperception in cells p 111 A93-21901  
Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548
- MURAKAMI, SATOSHI**  
Human factors in the 'glass cockpit' p 27 A93-11202
- MURALI, PAZHAYANNUR S.**  
Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391
- MURASKO, DONNA M.**  
Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662
- MURATA, YOSHIHARU**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029
- MURDOCH, D. J.**  
Cancer risk assessment with intermittent exposure p 171 A93-28766
- MUROI, N.**  
Research and development of sensing and manipulation techniques for space robotics on a testbed [AIAA PAPER 93-0794] p 136 A93-24873
- MUROTSU, YOSHISADA**  
Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot [AIAA PAPER 93-3863] p 392 A93-51449
- MURPHY, BARBARA A.**  
Sound attenuation characteristics of the standard DH-132A and SPH-4 helmets worn in combination with standard issue earplugs [AD-A263011] p 350 N93-29406
- MURPHY, OLIVER G.**  
Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process [SAE PAPER 921234] p 297 A93-41408
- MURPHY, OLIVER J.**  
Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process [SAE PAPER 921275] p 301 A93-41444
- MURRAY, DAVID W.**  
A modular head/eye platform for real-time reactive vision [OUEL-1941/92] p 320 N93-28897
- MURTHY, G.**  
Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295
- MUSACCHIA, X. J.**  
Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt p 37 A93-14974
- MUSSO, GIORGIO**  
Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture [SAE PAPER 921193] p 295 A93-41371
- MUTTER, SUSAN H.**  
Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 N93-20384
- MUZA, STEPHEN**  
Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge [AD-A264260] p 337 N93-30894
- MYERS, JENNIFER G.**  
Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program [DOT/FAA/AM-92/15] p 218 N93-24088  
A longitudinal examination of applicants to the air traffic control supervisory identification and development program [DOT/FAA/AM-92/16] p 257 N93-25213
- MYERS, K. J.**  
Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712  
Phenytin as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162
- MYERS, STEVEN F.**  
Vestibular afferent responses to microrotational stimuli p 328 A93-44930  
Hair cell tufts and afferent innervation of the bullfrog crista ampullaris p 329 A93-44931
- MYHRE, G.**  
The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704
- MYHRE, LOREN G.**  
Prediction of maximal oxygen uptake from submaximal exercise testing in aerobically fit and nonfit men p 385 A93-52304
- MYKITSHYN, MARK**  
Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377
- MYZNIKOV, I. L.**  
The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257
- ## N
- NACHEFF-BENEDICT, MAURENA S.**  
Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design [SAE PAPER 921277] p 301 A93-41446
- NADEL, ETHAN R.**  
Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure p 281 A93-41168
- NAEIJ, ROBERT**  
Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188
- NAGAO, MITUSHIRO**  
Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899
- NAGY, ALLEN L.**  
Chromaticity and luminance as coding dimensions in visual search p 103 A93-19989
- NAITOH, PAUL**  
Sleep inertia: Is there a worst time to wake up? [AD-A256602] p 52 N93-14240
- NAJIB, NAJI**  
Effects of gravity on gastric emptying, intestinal transit, and drug absorption p 85 A93-17543
- NAKAGAWA, S.**  
High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709
- NAKAGAWARA, VAN B.**  
The prevalence of artificial lens implants in the civil airman population [DOT/FAA/AM-92/14] p 253 N93-25214
- NAKAMURA, AKIO**  
Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321
- NAKAMURA, YUICHIROU**  
Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032
- NAKUYAMA, KEN**  
Intermediate levels of visual processing [AD-A264117] p 335 N93-30192
- NALETTE, TIMOTHY A.**  
Development of a regenerable metal oxide sheet matrix CO2 removal system [SAE PAPER 921298] p 302 A93-41463
- NALIZHITYI, V. M.**  
Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238
- NALIZHITYI, V. M.**  
Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333
- NARINSKAIA, A. L.**  
The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241
- NASH, P. V.**  
Variable lymphocyte responses in rats after space flight p 154 A93-28704
- NASIBULLIN, B. A.**  
Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670
- NAVARRO-GONZALEZ, RAFAEL**  
Computational study of radiation chemical processing in comet nuclei p 109 A93-17982
- NAVARRO, CHRISTINE**  
Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight p 272 A93-40548
- NAZAR, K.**  
Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498
- NAZARE, J.**  
Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal p 164 A93-28699
- NAZARENKO, A. I.**  
Characteristics of the effect of inert gases on in vivo tissue respiration p 112 A93-23152
- NAZARENKO, A. YI.**  
Mechanisms of the antihypoxic effect of taurine p 325 A93-43073
- NAZAROV, V. M.**  
Psychophysiological studies of acute hypoxic hypoxia p 91 A93-18417
- NEALE, L. S.**  
Alteration in human mononuclear leucocytes following space flight p 185 A93-28705
- NEALSON, KENNETH H.**  
Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle [NASA-CR-4497] p 269 N93-26157
- NEALSON, MOLLY STONE**  
Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle [NASA-CR-4497] p 269 N93-26157
- NEALY, J. E.**  
Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- NEALY, JOHN E.**  
Radiation exposure predictions for long-duration-stay Mars missions [AIAA PAPER 92-4584] p 28 A93-13288  
Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817  
Radiation exposure predictions for short-duration stay Mars missions [AAS PAPER 92-107] p 277 A93-39261
- NEARY, C.**  
Oculo-motor responses and virtual image displays p 319 N93-28862
- NEARY, CATHERINE**  
Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223
- NECHAEVA, E. I.**  
Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208
- NECHEPURENKO, A. E.**  
Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672
- NEDELEC, G.**  
Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304
- NEDUNGADI, A.**  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070
- NEFEDOVA, M.**  
AUDIMIR - Directional hearing at microgravity p 159 A93-26570
- NEFF, A. W.**  
Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745  
Altering the position of the first horizontal cleavage furrow of the amphibian (Xenopus) egg reduces embryonic survival p 272 A93-39717
- NEIL, L.**  
The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671
- NEKHAEV, A. S.**  
Informative value of the rerespiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors p 248 A93-35222  
Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244

- NEKHOROSHEV, A. S.**  
Morphological analysis of the hepatic structures in experimental animals after infrasonic exposure p 240 A93-35240
- NELSON, BARBARA J.**  
Heterogeneity of changes in lymphoproliferative ability with increasing age p 79 A93-20662
- NELSON, GREGORY A.**  
Caenorhabditis elegans - A model system for space biology studies p 80 A93-20665
- NELSON, MARK**  
Life systems for a lunar base p 66 N93-13992
- NELSON, PHILIP E.**  
Biomass productivity and sustainability of a bioregenerative life-support system [SAE PAPER 921359] p 307 A93-41518
- NELSON, ROBERT C.**  
Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission p 43 A93-13774
- NELSON, SCOTT A.**  
Quantitative Helmet Mounted Display system image quality model p 229 A93-30068
- NELSON, WILLIAM R.**  
Man-machine interface issues for space nuclear power systems p 60 A93-13907
- NEMIRE, K.**  
Visual and somesthetic influences on postural orientation in the median plane p 224 A93-32782
- NEMTSOV, I. Z.**  
Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- NENCIONI, L.**  
Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302  
Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate p 19 N93-11306
- NERI, D. F.**  
Effects of dextromethamphetamine on subjective fatigue [AD-A258252] p 119 N93-17822  
Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm [AD-A259243] p 171 N93-20580  
Simulated sustained flight operations and performance. Part 1: Effects of fatigue [AD-A261012] p 266 N93-25859
- NERI, DAVID F.**  
The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm [AD-A258146] p 122 N93-18292  
The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm [AD-A258156] p 132 N93-18294
- NESLEIN, I. L.**  
Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 N93-32261
- NESPOLI, P.**  
The European astronauts training programme p 226 N93-24346
- NESS, ROBERT O., JR.**  
Plasma reactor waste management systems p 68 N93-14000
- NESS, SUMITRA R.**  
Plasma reactor waste management systems p 68 N93-14000
- NESSIM, MAHER**  
A monitoring and control system for complex man-machine systems: Preliminary design p 70 N93-14951
- NESTERENKO, G. O.**  
The state of the endocrine system of rats of different age under conditions of immobilization stress and biomass administration p 242 A93-35671
- NEUBAUER, J. A.**  
Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia p 79 A93-20038
- NEUHAUSER, K. S.**  
Application of RADTRAN to estimation of doses to persons in enclosed spaces [DE93-000758] p 97 N93-17230
- NEVILLE, KELLY J.**  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264  
Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268
- NEWBOLD, DAVID D.**  
Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air [SAE PAPER 921321] p 304 A93-41483  
A novel membrane device for the removal of water vapor and water droplets from air [SAE PAPER 921322] p 304 A93-41484
- NEWMAN, DAVA J.**  
Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406
- NEWMAN, JAMES**  
An improved anthropometric test device p 143 N93-19670
- NEYLAND, DAVID L.**  
From pilot's associate to satellite controller's associate p 32 N93-11922
- NGUYEN, CHARLES C.**  
Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation p 364 A93-45598  
Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator p 407 A93-53038
- NGUYEN, DE**  
Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276
- NGUYEN, PHUNG**  
A space manipulator with inertially fixed base? [AIAA PAPER 93-3866] p 393 A93-51452
- NGUYEN, T.**  
Visual search in virtual environments p 233 A93-33450
- NICE, DAVID A.**  
Development of the Hermes EVA Space Suit Glove [SAE PAPER 921256] p 299 A93-41426
- NICKEL, JEFFERY D.**  
Improved head support stand adjustable by compound turnbuckle [AD-D015384] p 55 N93-15249
- NICOGLOSSIAN, ARNAULD E.**  
The space life sciences strategy for the 21st century p 1 A93-10636  
Meeting human needs [AAS PAPER 91-313] p 400 A93-54306  
NASA's manned space flight program [AAS PAPER 91-626] p 402 A93-55805
- NIE, G. Y.**  
The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins [DE93-002940] p 115 N93-19751
- NIEBOER, J. J.**  
Occupant simulation as an aspect of flight safety research p 142 N93-19665
- NIELSEN, S. S.**  
Biomass productivity and sustainability of a bioregenerative life-support system [SAE PAPER 921359] p 307 A93-41518
- NIENWOEHNER, DENNIS E.**  
Time course of functional repair of the alveolar epithelium after hyperoxic injury p 78 A93-20032
- NIKOLAEV, V. P.**  
A method for the theoretical calculation of the parameters of single-stage decompression with equal probability of safety p 160 A93-26832
- NISET, GEORGES**  
Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188
- NISHI, R. Y.**  
Statistically based decompression tables. 7: Selection and treatment of primary air and N<sub>2</sub>O<sub>2</sub> data [AD-A259090] p 172 N93-20587
- NISHIMURA, KOSUKE**  
Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177
- NISHIYASU, TAKESHI**  
Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure p 281 A93-41168
- NISINI, R.**  
Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303  
The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312
- NISINI, ROBERTO**  
Clinical types of Hepatitis B p 15 N93-11286  
Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305
- NITTA, K.**  
Development of the nitrogen fixation system for CELSS [SAE PAPER 921238] p 297 A93-41411  
CELSS nutrition system utilizing snails p 394 A93-52411
- NITTA, KEIJI**  
A trade study method for determining the design parameter of CELSS subsystems [SAE PAPER 921198] p 295 A93-41374  
Concept of waste transferring mechanisms [SAE PAPER 921239] p 297 A93-41412
- NIU, WILLIAM**  
The development of an atmosphere composition monitor for the Environmental Control and Life Support System [SAE PAPER 921149] p 292 A93-41333
- NIXON, DAVID**  
Vertical regolith shield wall construction for lunar base applications p 107 N93-17446
- NIXON, GLEN R.**  
Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station [NASA-CR-192015] p 139 N93-17973
- NJEMANZE, PHILIP C.**  
Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167
- NOBLE, LAWRENCE D., JR.**  
An update on the readiness of vapor compression distillation for spacecraft wastewater processing [SAE PAPER 921114] p 290 A93-41307
- NOEVER, DAVID A.**  
Process for selectively recovering algae and protozoa [NASA-CASE-MFS-26124-1-NPO] p 276 N93-29174
- NONEMAN, S. R.**  
Space Station Freedom payload operations in the 21st century p 350 A93-45436
- NONTASAK, T.**  
Performance differences in psychomotor and dichotic listening tests among landing craft air cushion vehicle operator trainees p 177 A93-27174
- NOORHOSSEINI, S. M.**  
Teleprogramming a cooperative space robotic workcell for Space Station p 190 A93-29109
- NORFLEET, WILLIAM T.**  
Issues on human acceleration tolerance after long-duration space flights [NASA-TM-104753] p 334 N93-29651
- NORLANDER, L.**  
Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 N93-28199
- NORO, O.**  
Research and development of sensing and manipulation techniques for space robotics on a testbed [AIAA PAPER 93-0794] p 136 A93-24873
- NORRELL, JEFFERY L.**  
Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806  
Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018
- NORSK, P.**  
Gravitational stress and volume regulation p 165 A93-28709  
Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096
- NORSK, PETER**  
Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans p 381 A93-49293  
Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620  
Central cardiovascular pressures during graded water immersion in humans p 402 A93-55457
- NORSWORTHY, R.**  
Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037  
An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137
- NORTHROP, V. M.**  
Evaluation and optimization of a flexible filtration system for respiratory protection system 21 [AD-A262467] p 284 N93-28758
- NORTON, CYNTHIA F.**  
Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557
- NORTON, R. D.**  
Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697
- NORTON, WILLIAM E.**  
Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 N93-14870

## O

- NOGAR, V. YI.**  
Mechanisms of the antihypoxic effect of laurine  
p 325 A93-43073
- NOOSKIN, A. D.**  
The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness  
p 241 A93-35242
- NOŠKOV, V. B.**  
Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission  
p 247 A93-35207
- NOVARA, M.**  
An operational evaluation process for long-duration mission habitats in space  
p 345 A93-42114
- NOVIKOV, V. S.**  
The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber  
p 251 A93-35257  
Immune and physiological mechanisms of hypoxic reactions  
p 384 A93-51116  
Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine  
p 402 A93-55332
- NOVIKOVA, E. I.**  
Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions  
p 243 A93-35672
- NOVIKOVA, N. D.**  
Microflora of cabins of manned space objects and the problem of biological damage to the structural materials used in them  
p 262 A93-35237
- NOVOTNY, J.**  
Process Control Water Quality Monitor for Space Station Freedom - Development update  
[SAE PAPER 921264]  
p 299 A93-41434
- NOVOTNY, JOHN**  
Continuous monitoring of effluent iodine levels of Space Station water using solid state technology  
[SAE PAPER 921265]  
p 299 A93-41435
- NOYES, GARY P.**  
Assessment of the state of the art in life support environmental control for SEI  
p 315 N93-27978
- NOZDRACHEV, A. D.**  
Roentgenophosphene as an indicator of the radiation excitability of the central nervous system  
p 325 A93-43078
- NOZHNITSKAIA, T. N.**  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite  
p 77 A93-18419
- NTUEN, CELESTINE A.**  
Modeling human response errors in synthetic flight simulator domain  
p 141 N93-19464  
Modeling the performance of the human (pilot) interaction in a synthetic flight domain: Information theoretic approach  
p 141 N93-19465  
Recognition of partially occluded threat objects using the annealed Hopfield network  
p 142 N93-19466
- NUMAGUCHI, T.**  
Development of the nitrogen fixation system for CELSS  
[SAE PAPER 921238]  
p 297 A93-41411
- NUNNELEY, S. A.**  
Thermal convergence fails to predict heat tolerance limits  
p 8 A93-10331
- NUNNELEY, SARAH A.**  
Heat stress in protective clothing - Validation of a computer model and the Heat-Humidity Index (HHI)  
p 88 A93-18040  
Thermal stress in US Air Force operations  
[AD-A255785]  
p 51 N93-14027  
Physiological stress from chemical defense clothing and equipment  
[AD-A255786]  
p 51 N93-14028
- NUNOHARA, TATSUYA**  
Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot  
[AIAA PAPER 93-3863]  
p 392 A93-51449
- NURITDINOV, E. N.**  
The role of dermorphin in the regulation of the winter hibernation processes in mammals  
p 38 A93-16748
- NYE,LENDELL G.**  
Poststrike air traffic control trainees - Biodemographic predictors of success in selection and screening  
p 56 A93-15664  
Some personality and aptitude characteristics of Air Traffic Control Specialist trainees  
p 388 A93-52301
- NYGREN, THOMAS E.**  
Cognitive and affective components of mental workload: Understanding the effects of each on human decision making behavior  
p 99 N93-16783
- O'BRIEN, KEVIN M.**  
Display format and highlight validity effects on search performance using complex visual displays  
p 187 A93-27160
- O'CONNOR, FRANCES**  
Cardiovascular responses to lower body negative pressure in trained and untrained older men  
p 115 A93-21686
- O'HARE, DAVID**  
The 'artful' decision maker - A framework model for aeronautical decision making  
p 56 A93-15662
- O'LEARY, ANN**  
Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures  
p 405 A93-55348
- O'LEARY, JARROD D.**  
Instrumentation for microbial monitoring of decontamination or biocide system effectiveness  
[SAE PAPER 921233]  
p 297 A93-41407
- O'NEILL, P. M.**  
Depth-dose equivalent relationship for cosmic rays at various solar minima  
p 391 A93-49564
- OAKES, DENNIS L.**  
Physiological effects of positive pressure ventilation  
[AD-A254809]  
p 49 N93-12751
- OATES, T.**  
Electroencephalogram epileptiform abnormalities in candidates for aircrew training  
p 170 A93-28757
- OENHUBER, D. C.**  
Aquatic biofilms and their responses to disinfection and invading species  
[SAE PAPER 921211]  
p 296 A93-41387  
Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems  
[NASA-CP-192571]  
p 359 N93-32365
- OBERBECK, VERNE R.**  
Comet impacts and chemical evolution on the bombarded earth  
p 109 A93-17980
- OBERDORSTER, GUNTER**  
Potential health effects of fume particles on the crew of spacecrafts  
[SAE PAPER 921387]  
p 308 A93-41545  
Potential health hazards from thermal degradation events - Particulate vs. gas phase effects  
[SAE PAPER 921388]  
p 282 A93-41546
- O'BRIEN, EDWARD M.**  
Investigation into the common mode rejection ratio of the physiological signal conditioner circuit  
p 245 N93-26073
- O'BRIEN, LAWRENCE H.**  
Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions  
[AD-A252820]  
p 26 N93-11779
- OBUKHOVA, M. F.**  
The role of dermorphin in the regulation of the winter hibernation processes in mammals  
p 38 A93-16748
- ODA, MITSUSHIGE**  
Space robotics and its man-machine interface  
p 27 A93-11204
- ODINAK, M. M.**  
Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots  
p 91 A93-18416
- ODOR, RONALD K.**  
How do zooplankton feed? A critical microgravity experiment  
p 158 N93-21097
- OEZL, O.**  
Does drinking protect against mountain sickness?  
p 382 A93-49565
- OEZL, OSWALD**  
Interactions between Hb, Mg, DPG, ATP, and Cl determine the change in Hb-O2 affinity at high altitude  
p 279 A93-41117
- OFFENLOCH, K.**  
Rated performance, cardiovascular and quantitative EEG parameters during simulated instrument flight under the effect of terfenadine  
p 165 A93-28708
- OGANOV, V. S.**  
Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antihypostatic hypokinesia  
p 170 A93-28760
- OGIMOTO, K.**  
Research and development of sensing and manipulation techniques for space robotics on a testbed  
[AIAA PAPER 93-0794]  
p 136 A93-24873
- OGISO, SHINYA**  
Telemanipulation experiment using predictive display  
p 411 A93-56256
- OGLE, CHARLES D.**  
Comparing the Cattell 16PF profiles of male and female commercial airline pilots  
p 178 A93-27177
- OGRELL, O. D.**  
Ozone - A new aspect of its effect on microorganisms  
p 398 A93-54971
- OHIRA, A.**  
CELSS nutrition system utilizing snails  
p 394 A93-52411
- OHIRA, YOSHINOBU**  
Adaptation of skeletal muscles and physical work capacity in a weightless environment  
p 38 A93-15527
- OHLUND, KENT**  
Emergence of telerobotic control enhancement from research in machine autonomy  
p 183 A93-27028
- OHMORI, SACHIKO**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men  
p 92 A93-20029
- OHTSUKA, AKIKO**  
Research of a free-flying telerobot. IV - Development of dual-arm manipulation system  
p 411 A93-56254
- OKA, YURIKO**  
Lunar surface experiment system  
p 316 N93-28034
- OKADA, TADASHI**  
Hematological changes in space microgravity environments  
p 46 A93-15528
- OKOS, M. R.**  
Development of physical and mathematical models for the Porous Ceramic Tube Plant Nutrifcation System (PCTPNS)  
[NASA-TM-107551]  
p 4 N93-10085
- OKUDAIRA, TOSHIAKI**  
Conceptual study of manned lunar surface site  
p 316 N93-28031
- OLDING, BILL**  
Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s  
[AD-A255691]  
p 52 N93-14103
- OLEA, MICHELE M.**  
Predicting aircrew training performance with psychometric g  
[AD-A264021]  
p 340 N93-30026
- OLEINER, V. D.**  
The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system  
p 2 A93-12861
- OLIVADOTI, J. T.**  
Regenerable Microbial Check Valve - Life cycle tests results  
[SAE PAPER 921316]  
p 303 A93-41478
- OLIVEIRA, F. B.**  
Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force  
p 369 N93-32255
- OLLIVIER, Y.**  
Development of a 500 hPa shoulder joint for the European EVA Space Suit System  
[SAE PAPER 921257]  
p 299 A93-41427
- OLSEN, DALE E.**  
Automatic detection of seizures with applications  
p 254 N93-25592
- OLSEN, NIELS V.**  
Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects  
p 93 A93-20035  
Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans  
p 332 A93-44180
- OLSEN, R. G.**  
Specific absorption rate and radiofrequency current-to-ground in human models exposed to near-field irradiation  
p 360 A93-47098
- OLSZEWSKA, K.**  
Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining  
p 242 A93-35498
- OMAN, CHARLES M.**  
Space motion sickness monitoring experiment - Spacelab 1  
p 403 A93-55941
- ONEAL, MELVIN R.**  
Armstrong Laboratory space visual function tester program  
p 284 N93-28739  
Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1)  
p 284 N93-28740  
Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2)  
p 284 N93-28741  
Effect of microgravity on the visual near point: Visual Function Tester-Model 4 (VFT-4)  
p 284 N93-28742
- ONEIL, M. P.**  
Primary charge separation in isolated photosystem 2 reaction centers  
[DE92-041128]  
p 82 N93-17189
- ONEILL, R. V.**  
Scaling issues for biodiversity protection  
[DE92-016689]  
p 6 N93-12315
- ONES, D. S.**  
Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables  
[AD-A254681]  
p 27 N93-12225

## ONKEN, R.

### ONKEN, R.

- Monitoring of pilot actions as part of a knowledge-based system for pilot assistance p 59 N93-15184  
Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 N93-28855

### ONO, S.

- Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186

### ONO, Y.

- Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762

### ONODERA, SHO

- Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898

### ONOZAWA, AKIHIKO

- Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286

### OOSTERVELD, W. J.

- Barotrauma in Boeing 737 cabin crew p 278 A93-39706

### OOTUKA, AKIKO

- Research of a free-flying telerobot. V - Handling a target with multi-arms p 411 A93-56255

### OPITZ, M.

- AUDIMIR - Directional hearing at microgravity p 159 A93-26570

### ORASANO, JUDITH

- Individual differences in airline captains' personalities, communication strategies, and crew performance p 177 A93-27175

### ORGEL, LESLIE E.

- In vitro selection of optimal DNA substrates for T4 RNA ligase p 329 A93-44939  
Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection p 397 A93-52878

### ORLANDO, ROBERTO

- Effects of air bubble contamination in recirculating water loop [SAE PAPER 921282] p 302 A93-41450

### ORLANSKY, JESSE

- The effect of wearing protective chemical warfare combat clothing on human performance p 230 A93-30287

- The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 N93-12491

### ORNHAGEN, HANS

- Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis p 7 A93-10329

### ORO, J.

- Comets and the formation of biochemical compounds on the primitive earth - A review p 109 A93-17977

### ORO, JOHN

- Europa: Prospects for an ocean and exobiological implications p 113 N93-18552

### OSADCHII, O. E.

- Vagotropic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749

### OSER, RANDALL

- Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575

### OSGOOD, ROBERT K.

- The effects of head and sensor movement on flight profiles during simulated dive bombing p 185 A93-27131

### OSHAUGHNESSY, DAVID M.

- Automated system for analyzing the activity of individual neurons p 173 N93-22163

### OSHIMA, T.

- Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408

### OSNABRUEGGE, GABRIELE

- International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection [DLR-FB-92-12] p 225 N93-24104

### OSSORIO, PETER G.

- Person-like intelligent systems architectures for robotic shared control and automated operations p 191 A93-29113

### OSTROM, L. T.

- Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA [DE93-001923] p 321 N93-28942

### OSTROVSKIJ, D. N.

- Ozone - A new aspect of its effect on microorganisms p 398 A93-54971

### OSTROWSKI, STANISLAW

- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 A93-28293

### OTT, E.

- Influence of microgravity on immune system and genetic information p 160 A93-26572  
Influence of microgravity on immune system and genetic information p 220 N93-24370

### OUELLETTE, FRED A.

- Design of a Shuttle air and water prefilter for reduced gravity operation [SAE PAPER 921161] p 294 A93-41343

### OVCHINNIKOV, A. E.

- Maximal lung ventilation and forced expiration rate under hyperbaria p 76 A93-18297

### OVCHINNIKOV, V. V.

- Data bank establishment principles as applied to the problem of physiological norms in space medicine p 249 A93-35234

### OVENDEEN, C. R.

- Model-based reasoning applied to cockpit warning systems p 147 N93-19778

### OWEN, TOBIAS

- Titan p 114 N93-18553

## P

### PACKHAM, NIGEL J. C.

- An assessment of waste processing/resource recovery technologies for lunar/Mars life applications [SAE PAPER 921271] p 300 A93-41441

- A hybrid regenerative water recovery system for lunar/Mars life support applications [SAE PAPER 921276] p 301 A93-41445

### PADDAN, GURMAIL S.

- Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 N93-32237

### PADOAN, SERGE

- Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis p 7 A93-10329

### PAIGE, GARY D.

- Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural p 203 A93-32773

### PAKHOMOV, A. I.

- The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242

### PAKHUNOVA, L. V.

- Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252

### PALAZZO, REGINA M.

- Time course of functional repair of the alveolar epithelium after hyperoxic injury p 78 A93-20032

### PALERMOS, J.

- Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318

### PALOSKI, W. H.

- Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750

### PANASENKO, N. A.

- Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228

### PANFEROVA, N. E.

- The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216

### PANG, CHENG

- Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074

### PANNIER, B. M.

- Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716

### PANOV, A. A.

- Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188

### PAPPAS, D.

- Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317

### PARADISO, MICHAEL A.

- Theory of synaptic plasticity in visual cortex [AD-A260052] p 224 N93-23960

- Theory of synaptic plasticity in visual cortex [AD-A260322] p 219 N93-24238

### PARASURAMAN, RAJA

- Performance consequences of automation-induced 'complacency' p 286 A93-39571

- Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts p 64 N93-12860

### PARAZYNSKI, S. E.

- Direct measurement of capillary blood pressure in the human lip p 279 A93-40550

### PARFITT, ALAN

- Training analysis for the European Fighter Aircraft - 'A voyage into the unknown' p 98 A93-18769

### PARHAM, KENNETH R.

- Anthropometry of the foot and lower leg of U.S. Army soldiers: Fort Jackson, SC [AD-A261405] p 268 N93-26404

### PARK, E.

- A simple hindlimb suspension apparatus p 398 A93-55168

### PARK, EUI H.

- Recognition of partially occluded threat objects using the annealed Hopfield network p 142 N93-19466

### PARK, JONG H.

- World model and its uncertainty in supervisory robot control p 183 A93-27027

### PARKER, DICK

- Distribution of human waste samples in relation to sizing waste processing in space p 68 N93-14001

### PARKER, DONALD E.

- Human vestibular function and weightlessness p 84 A93-17531

- Mental rotation - A key to mitigation of motion sickness in the virtual environments? p 387 A93-49404

- Adaptation to the simulated stimulus rearrangement of weightlessness p 403 A93-55942

### PARKER, E. C.

- Statistically based decompression tables 8: Linear-exponential kinetics [AD-A257613] p 120 N93-17926

### PARKER, KATHERINE L.

- Adaptation to the simulated stimulus rearrangement of weightlessness p 403 A93-55942

### PARKINSON, M. D.

- Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287

### PARRISH, CLYDE F.

- Lightweight passive microclimate cooling device [AD-A262262] p 317 N93-28112

### PARRISH, J. A.

- Center of Excellence in laser medicine [DE92-018760] p 22 N93-11445

### PARRISH, RUSSELL V.

- Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895

- Depth-viewing-volume increase by collimation of stereo 3-D displays p 407 A93-52915

- In-simulator assessment of trade-offs arising from mixture of color cuing and monocular, binoptic, and stereopsis cuing information p 407 A93-52916

### PARULESKI, KERRY L.

- Lunar base requirements for human habitability p 345 A93-41995

- Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 N93-18156

### PARUS, R.

- Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681

### PASHCHENKO, P. S.

- Structural and cytochemical signs of the development of deadaptation, as determined from blood characteristics p 252 A93-36724

### PASHLER, HAROLD

- Doing two things at the same time p 180 A93-27817

### PASSERI, DANIEL R.

- Immunocjugates: Magic bullets for cancer therapy? p 253 N93-25567

### PASSINI, CHERYL A.

- Response of a mouse hybridoma cell line to heat shock, agitation, and sparging p 328 A93-44928

- Intracellular proteins produced by mammalian cells in response to environmental stress p 328 A93-44929

### PASTOR, D.

- G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775

### PASTOR, M.

- European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed [SAE PAPER 921200] p 295 A93-41376

### PATAT, F.

- Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681

- PATEL, SAUMIL**  
Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547
- PATERSON, DAVID J.**  
The effects of chronic hypoxia on human auditory system sensitivity p 89 A93-18041
- PATTEN, B. M.**  
Neurology of microgravity and space travel p 168 A93-28735
- PATTERSON, J.**  
Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780
- PATTERSON, ROBERT**  
Factors that affect depth perception in stereoscopic displays p 230 A93-30455  
Human stereopsis p 223 A93-30456
- PAUL, R.**  
Visual search in virtual environments p 233 A93-33450
- PAUSCH, RANDY**  
A literature survey for virtual environments - Military flight simulator visual systems and simulator sickness p 387 A93-49406
- PAVLOVICH, N. V.**  
Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan [FOA-B-40421-4.4] p 275 N93-28200
- PAWLAK, EUGENE A., SR.**  
Development of measures of crew coordination [AD-A255384] p 70 N93-14651
- PAXINOS, ODYSSEAS**  
Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 N93-19698
- PAXTON, T. A.**  
An on-line water quality monitor for Space Station Freedom p 364 A93-46801
- PEARSON, JACKIE**  
Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment [AD-A258502] p 129 N93-20400
- PEARSON, JACQUELYN Y.**  
Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator [AD-A258012] p 119 N93-17817  
The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness p 283 N93-27923  
The effects of cockpit heat on aviator sleep parameters p 371 N93-32266
- PEARSON, LILLIAN**  
Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970
- PEARSON, NORMAN**  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042
- PEARSON, S. M.**  
Scaling issues for biodiversity protection [DE92-016689] p 6 N93-12315
- PEDERSEN, B. K.**  
Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines p 280 A93-41123
- PEI, JING-SHEN**  
Influence of space-flight factors on growth of spirulina p 199 A93-30441
- PEI, JINGSHEN**  
Response characteristics of semicircular canal in cats under linear acceleration p 3 A93-13536
- PELL, J.**  
Manned Space-Laboratories Control Centre (MSCC) training p 339 A93-43330
- PELLIGRA, R.**  
Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697
- PENALOZA, R.**  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191
- PENG, C.-K.**  
Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049
- PENNEY, DAVID G.**  
Heart and lung alterations in neonatal rats exposed to CO or high altitude p 77 A93-20027
- PENNINGTON, JACK E.**  
Teleoperation to robotics at Langley Research Center p 101 A93-18569
- PEPPER, L. J.**  
Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783
- PEQUIGNOT, J.**  
Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030
- PEQUIGNOT, J. M.**  
Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030
- PEQUIGNOT, JEAN-MARC**  
Norepinephrine content in discrete brain areas and neurohypophysial vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- PERAGALLO, M.**  
Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- PERBAL, G.**  
Gravity and root morphogenesis p 210 N93-24403
- PERBET, J.-N.**  
Multimodal dialog system for future cockpits p 146 N93-19773
- PEREPECH, B. L.**  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419  
The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242
- PEREVERZEV, V. A.**  
The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034
- PEREZ, MANUEL A.**  
Direct manipulation and intermittent automation in advanced cockpits [AD-A253814] p 32 N93-11784
- PEREZ, WILLIAM A.**  
Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements [AD-A262872] p 351 N93-29484
- PERKINS, LEIGH ANN**  
Finite element analysis of a composite artificial ankle p 174 N93-22189
- PERLOT, SUSAN**  
The role of Environmental Health System air quality monitors in Space Station Contingency Operations [SAE PAPER 921414] p 310 A93-41565
- PEROV, S. N.**  
Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- PEROVA, L. A.**  
Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223
- PERRONE, JOHN A.**  
Model for the computation of self-motion in biological systems p 97 A93-17673
- PERRY, CHRIS E.**  
The effect of variable seat back angles on human response to +Gz impact accelerations [AD-A250673] p 31 N93-11559
- PERRY, J. L.**  
Computerized atmospheric trace contaminant control simulation for manned spacecraft [NASA-TM-108409] p 321 N93-28977
- PERRY, M. R.**  
Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757
- PERSTERER, A.**  
AUDIMIR - Directional hearing at microgravity p 159 A93-26570
- PESTOV, I. C.**  
Physiological experiments within the project AustroMir p 219 N93-24354
- PETERKA, ROBERT J.**  
Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176  
Response characteristics of the human torsional vestibuloocular reflex p 215 A93-32774  
Role of orientation reference selection in motion sickness [NASA-CR-191912] p 124 N93-18596  
Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 N93-32364
- PETERS, DANIEL R.**  
The pigmentary dispersion disorder in USAF aviators p 87 A93-18033
- PETERS, JOSEPH I.**  
Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements [AD-A262872] p 351 N93-29484
- PETERSON, L. E.**  
Longitudinal study of astronaut health - Mortality in the years 1959-1991 p 216 A93-32783
- PETERSON, STEVEN W.**  
A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging [SAE PAPER 921253] p 298 A93-41423  
Power assist EVA glove development [SAE PAPER 921255] p 299 A93-41425  
EVA Glove Research Team [NASA-CR-193014] p 313 N93-27847  
A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848  
A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849  
Power assist EVA glove development p 314 N93-27850
- PETIT, CLAIRE**  
The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 N93-19705
- PETRELLI, G.**  
The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312
- PETRIE, GLENN E.**  
Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design [SAE PAPER 921277] p 301 A93-41446
- PETROVA, M. A.**  
Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558
- PETTENSKI, T. A.**  
Evaluation of multilayer mask concept for RESPO 21 [AD-A253392] p 33 N93-12079
- PEYRIN, L.**  
Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030
- PEZESHKPOUR, G. H.**  
An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 N93-30818
- PFaff, MARK S.**  
Army cockpit dealthalization program p 61 A93-15419
- PFEIFER, ROBERT**  
Lunar habitats - Places for people p 344 A93-41991
- PHATAK, ANIL V.**  
Things that go bump in the light - On the optical specification of contact severity p 256 A93-35099
- PHILLIPS, BRIAN**  
Preliminary design of a radiator shading device for a lunar outpost [NASA-CR-192016] p 139 N93-18019
- PHILLIPS, NORMAN**  
Study design for microgravity human physiology experiments p 118 A93-25208
- PHILLIPS, ROBERT W.**  
Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 N93-13449
- PHILPOTT, D.**  
Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498
- PHILPOTT, DELBERT E.**  
Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935
- PHINNEY, D.**  
Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037
- PHIPPS, BARRY M.**  
Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821
- PIANTANIDA, THOMAS P.**  
Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443
- PICHAN, G.**  
Changes in body fluid compartments during hyponatremia and rehydration in heat-acclimated tropical subjects p 251 A93-35496
- PICHKUROV, A. M.**  
Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214
- PICKWORTH, W.**  
The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB [AD-A254840] p 27 N93-12432

**PIENTOK, COLETTE**

- Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039

**PIERSON, BEVERLY K.**

- Chloroflexus aurantiacus and ultraviolet radiation - Implications for Archean shallow-water stromatolites p 400 A93-55999

**PIERSON, D. L.**

- A microfermentation test for the rapid identification of yeasts p 156 A93-28733  
Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704  
Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705

**PIERSON, DUANE L.**

- Microbiology operations and facilities aboard restructured Space Station Freedom [SAE PAPER 921213] p 296 A93-41389  
Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390  
Altered immunological response in mice subjected to stress and exposed to fungal spores [SAE PAPER 921215] p 274 A93-41391  
Biofilm formation and control in a simulated spacecraft water system - Three year results [SAE PAPER 921310] p 303 A93-41472  
Infectious disease p 81 A93-16804  
Kinetic tetrazolium microtiter assay [NASA-CASE-MS-21979-1] p 82 A93-17049

**PIJPERS, E. W.**

- Overview of cockpit technology research and development programs for improvement of the man/machine interface: Review of the AGARD AVP Symposium held in Madrid, May 1992 p 320 A93-28872

**PILMANIS, ANDREW A.**

- The Proceedings of the Hypobaric Decompression Sickness Workshop [AD-A257612] p 123 A93-18362

**PINEDA, JAIME A.**

- Extrathalamic modulation of cortical function [AD-A255440] p 53 A93-14782

**PINKNEY, H. F. L.**

- Machine vision in space p 395 A93-52641

**PINTER, ELENA**

- Silent HIV infection p 16 A93-11293

**PITTMAN, M. E.**

- A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 A93-19672

**PIZARRO, DAVID**

- Overconfidence, preview, and probability in strategic planning p 179 A93-27195

**PLAGHKI, LEON**

- Development of the Hermes EVA Space Suit Glove [SAE PAPER 921256] p 299 A93-41426

**PLANQUE, S.**

- Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 A93-19708

**PLAZEN, GENEVIEVE**

- Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035

**PLEY, URSULA**

- Life in hot springs and hydrothermal vents p 243 A93-36559

**PLOCHER, TOM**

- CREWCUT - A new tool for predicting human performance in conceptual systems p 178 A93-27179

**PLOURDE, J. V.**

- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment) [AD-A255525] p 70 A93-14554  
Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 A93-17697

**POCHKHUA, M. A.**

- Some indices of humoral immunity in Rhesus monkeys under the effect of extreme space flight factors p 241 A93-35258

**PODDA, A.**

- Absence of protective immunity against diphtheria in a large proportion of young adults p 18 A93-11302

**POGODIN, M. A.**

- Maximal lung ventilation and forced expiration rate under hyperbaria p 76 A93-18297

**POHOSKA, E.**

- Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498

**POKROVSKII, V. M.**

- Vagotropic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749

**POLIakov, V. V.**

- Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207  
Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238

**POLIakova, A. P.**

- Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238

**POLINER, JEFF**

- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 A93-12211

**POLINER, JEFFREY**

- Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 A93-25736

**POLLACK, JAMES B.**

- Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 A93-18551

**POLLAK, CHARLES P.**

- The effects of an antijet lag diet p 370 A93-32263

**POLYAKOV, V. V.**

- Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401

**POMEKHINA, I. L.**

- The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system p 2 A93-12861

**PONG, YING**

- Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177

**PONNAMPERUMA, CYRIL**

- A lunar-based chemical analysis laboratory [ISBN 0-937194-25-5] p 39 A93-17426  
Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL) p 39 A93-17429  
Computational study of radiation chemical processing in comet nuclei p 109 A93-17982

**PONOMARENKO, K. V.**

- The problem of the pilot's professional reliability p 410 A93-55334

**PONOMARENKO, V. A.**

- Psychophysiological principles of flight training for actions in nonroutine situations p 256 A93-35233  
Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249  
Occupational health problems in aviation medicine p 252 A93-36743  
Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694

**PONOMAREVA, I. L.**

- Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287

**POOL, SAM L.**

- Electronystagmography and audio potentials in space flight p 9 A93-11675

**POORMAN, TOM**

- Continuous monitoring of effluent iodine levels of Space Station water using solid state technology [SAE PAPER 921265] p 299 A93-41435

**POPE, ALAN T.**

- Identification of hazardous awareness states in monitoring environments [SAE PAPER 921136] p 287 A93-41324  
Method of encouraging attention by correlating video game difficulty with attention level [NASA-CASE-LAR-15022-1] p 288 A93-28128

**POPE, J. C. D.**

- Oculo-motor responses and virtual image displays p 319 A93-28862

**POPOV, I. G.**

- Some features characterizing the supply of astronauts with vitamins C, B1, B2, and B6 during nourishment from canned-food rations on long-term space flights p 249 A93-35231

**POPOV, K. E.**

- Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653

**POPOV, V. V.**

- The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242

**POPOVA, I. A.**

- Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254

**POPPER, STEPHEN E.**

- Individual differences and subgroups within populations - The shopping bag approach p 136 A93-24050

**POPYACK, LEONARD J.**

- Time stress measurement devices for enhancement of onboard bit performance p 144 A93-19762

**POQUIN, D.**

- Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870

**PORTH, CAROL J. M.**

- Posture and the circulation - The age effect p 93 A93-20653

**POTEAT, JERE**

- Development of membrane gas removal technology for microgravity liquid flow systems [SAE PAPER 921162] p 294 A93-41344

**POULTER, N.**

- Hypertension and the probability of an incapacitating event over a defined period - Impact of treatment p 215 A93-32777

**POURCELOT, LEANDRE**

- Biomedical engineering and space p 103 A93-20015

**POVILAITITE, P. E.**

- Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain p 77 A93-18300

**POWELL, FRANK L.**

- Effect of chronic hypoxia on hypoxic ventilatory response in awake rats p 323 A93-42187

**POWELL, JAMES R.**

- A computer model to determine the primary contributors to relative radiation dose received by astronauts p 43 A93-13935

**POWELL, MICHAEL R.**

- Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153

**POWERS, JANET V.**

- Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report p 375 A93-49206  
Publications of the Space Physiology and Countermeasures Program, Neuroscience Discipline: 1980-1990 p 55 A93-15583  
Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990 p 123 A93-18376

**POWERS, JEFFREY**

- CREWCUT - A new tool for predicting human performance in conceptual systems p 178 A93-27179

**POWITZ, G.**

- Toxicological investigations of flight accidents: Findings and methods p 126 A93-19695

**POWLIK, J.**

- Gravity as a factor in the orientation and vertical migration of marine zooplankton p 158 A93-21098

**PRASAD, A. S. K.**

- Lower body negative pressure system for simulation of +Gz-induced physiological strain p 119 A93-25210

**PRAYDIVTSEV, V. A.**

- Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness p 239 A93-35211

**PREISS, H.**

- Recent regenerative ECLSS technology developments in Europe [SAE PAPER 921332] p 304 A93-41493

**PREVIC, FRED H.**

- Visual scene effects on the somatogravic illusion p 88 A93-18035

**PREVOST, MICHAEL**

- Human visual performance model for crewstation design p 182 A93-26887  
Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323

**PRICE, CHARLES R.**

- Future needs for space robots for SEI p 182 A93-27002

**PRICE, D. L.**

- Relative resistance of biofilms and planktonic cells of common molds and yeasts to antimicrobials [SAE PAPER 921212] p 273 A93-41388

**PRICE, SCOTT A.**

- Abridged procedural guide to aircrew anthropometric accommodation assessment [AD-A265220] p 366 A93-32006

**PRIEBE, WALDEMAR**

- <sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 A93-28293



## Q

- PRIEZ, ALAIN**  
The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 N93-19705
- PRINCE, CAROLYN**  
Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575
- PRINCE, J. C.**  
The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 N93-19782
- PRINCE, R. P.**  
Engineering verification of the biomass production chamber p 67 N93-13996
- PRINGLE, HEATHER L.**  
Dual-task training strategies and aging [AD-A258261] p 131 N93-18027
- PRISK, G. K.**  
Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity p 386 A93-52617
- PROFFITT, D. R.**  
Influence of animation on dynamical judgments p 180 A93-28692
- PROFFITT, DENNIS R.**  
Using the stereokinetic effect to convey depth - Computationally efficient depth-from-motion displays p 102 A93-19987  
Influence of animation on dynamical judgments p 98 A93-20275
- PRONYCH, SCOTT**  
Studying the effects of microgravity on lower vertebrate development and behavior p 158 N93-21099
- PROST, MICHEL**  
Free radical attack - Biological test for human resistance capability p 39 A93-17434
- PROTASOV, K. T.**  
Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115
- PRUDCHENKO, I. A.**  
Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101
- PRUSACZYK, W. K.**  
Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALs) [AD-A258364] p 121 N93-18209  
Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training [AD-A261059] p 267 N93-26229
- PRUTCHI, DAVID**  
New technologies for in-flight pasteless bioelectrodes p 289 A93-41174
- PULLEN, JOHN L.**  
The Servicing Aid Tool p 192 A93-29116
- PUNG, Y.-H.**  
Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 N93-11306
- PURVIS, BRADLEY D.**  
An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information [AD-A263874] p 353 N93-29888
- PUTCHA, LAKSHMI**  
Pharmacokinetics and Pharmacodynamics in Space [NASA-CP-10048] p 333 N93-29502
- UTILOV, A. A.**  
Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214
- PUTZ, P.**  
EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory p 231 A93-31522
- PUTZKA, A.**  
Mir 1992 operations and crew training p 226 N93-24352
- PYLE, ANNA M.**  
Ribozymes - A distinct class of metalloenzymes p 398 A93-54163
- PYLE, BARRY H.**  
Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight [SAE PAPER 921232] p 297 A93-41406
- PYYKKO, ILMARI**  
Postural stabilization on a moving platform oscillating at high frequencies p 252 A93-35497
- QI, ZHANGNIAN**  
Radiation dose measurement and biostack experiment in biocabin on board satellite p 327 A93-44845
- QIAN, JINKANG**  
Protective effects of *Rhodiola crenulata* on rats under antithrostatic position and professional athletes p 327 A93-44843
- QIAN, YAORONG**  
Kinetics of peptide hydrolysis and amino acid decomposition at high temperature p 411 A93-53289
- QIU, REN-ZHI**  
Effect of heat acclimatization on cAMP level in plasma, cerebrospinal fluid and preoptic area-hypothalamus in hyperthermal rabbits p 199 A93-30437
- QUALLS, GARRY D.**  
Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817
- QUATTLEBAUM, MARTIN**  
Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s [AD-A255691] p 52 N93-14103
- QUIGLEY, MARK D.**  
Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise [AD-A259068] p 124 N93-19072
- QUINTELA, A.**  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191

## R

- RABIN, JEFF**  
Spatial contrast sensitivity through aviator's night vision imaging system p 393 A93-52300
- RABIN, JEFF C.**  
Human visual limitations on suprathreshold contrast perception through ANVIS [AD-A259970] p 226 N93-24431
- RABIN, R.**  
Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568
- RABIN, ROBERT**  
NASA Specialized Center for Research and Training (NSCORT) in space environmental health [SAE PAPER 921358] p 307 A93-41517
- RABINOWITZ, WILLIAM M.**  
Programmable interactive system for cochlear implant electrode stimulation [AD-A262558] p 333 N93-29421
- RACCA, EDDY L.**  
C.R.M. training for the advanced flight deck p 24 A93-13410
- RAD, ADRIAN L.**  
Safety issues of manipulator systems under computer control p 192 A93-29121
- RADIEVSKI, A. E.**  
Distribution of functions in a man-machine control system of a certain type p 364 A93-45687
- RADOMSKI, M. W.**  
Effects of sleep deprivation and exercise on glucose tolerance p 281 A93-41165
- RAEDER, ERNST A.**  
Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500
- RAFFNER, E.**  
An operational evaluation process for long-duration mission habitats in space p 345 A93-42114
- RAFOLT, D.**  
Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367
- RAHMAN, HASAN H.**  
MAC to VAX connectivity: Heart rate spectral analysis system p 254 N93-25594
- RAIJ, DAVID**  
Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements p 287 A93-40772
- RAJAGOPAL, K. R.**  
Hemodynamic effects of altitude exposure and oxygen administration in chronic obstructive pulmonary disease p 383 A93-49571
- RAJULU, SUDHAKAR**  
Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 N93-12211
- RAJULU, SUDHAKAR L.**  
An improved simulation based biomechanical model to estimate static muscle loadings p 160 A93-27172
- A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests [SAE PAPER 921154] p 293 A93-41337
- A study to explore locomotion patterns in partial gravity environments [SAE PAPER 921157] p 293 A93-41340
- A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population [NASA-TP-3286] p 96 N93-16619
- Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment [NASA-TM-104767] p 234 N93-23129
- Anthropometric survey of the astronaut applicants and astronauts from 1985 to 1991 [NASA-RP-1304] p 321 N93-29324
- RAKHMANOV, A. S.**  
Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antithrostatic hypokinesia p 170 A93-28760
- RAM, K. S.**  
Designs and development of a master-slave teleoperated robot p 390 A93-49357
- RAMACHANDRAN, G.**  
Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072
- RAMACHANDRAN, V. S.**  
Neural basis of motion perception [AD-A261452] p 260 N93-26349
- RAMAMURTHY, MAYA**  
Architecture of autonomous systems [NASA-CR-192974] p 266 N93-26047
- RAMDI, H.**  
Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302
- RAMESH, B.**  
Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125
- RAMEY, MADISON**  
Initial experiments on the end-point control of a 2-DOF long-reach elastic manipulator p 183 A93-27024
- RAMIREZ, GERMAN**  
Effects of hypoxemia at sea level and high altitude on sodium excretion and hormonal levels p 8 A93-10332
- RAMIREZ, T. L.**  
Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757
- RAMIREZ, W. F.**  
Space habitat contaminant growth models. II p 345 A93-42094
- RANDALL, CHARLIE**  
Mission and Safety Critical (MASC): An EVACS simulation with nested transactions [NASA-CR-192295] p 149 N93-20314
- RANDOLPH, W.**  
Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms [AD-A259803] p 217 N93-23459
- RANGARAJAN, N.**  
Microcomputer based software for biodynamic simulation p 196 N93-22191
- RAO, SUDHAKAR K.**  
Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125
- RAPHEL, C.**  
Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870
- RAPMUND, GARRISON**  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121
- RAPPUOLI, R.**  
Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- RASH, CLARENCE E.**  
Visual illusions and other effects with night vision devices p 230 A93-30072
- RASMUSSEN, O. S.**  
The USO-concept applied to a biological model experiment p 210 N93-24379
- RASMUSSEN, P. G.**  
A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321
- RASMUSSEN, PER**  
Comparison between VDV and a(rms) using simulated impulsive vibration p 91 A93-19991

## RASMUSSEN, STEEN

### RASMUSSEN, STEEN

Self-programming of matter and the evolution of proto-biological organizations  
[DE92-015244] p 5 N93-10628

### RATE, CHRIS

3-D target designation using two control devices and an aiding technique p 408 A93-53120

### RATH, HANS J.

Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072

### RATHJUE, HERMANN

Computer-generated parallel tests for aptitude measurement in the selection of aviation operators [DLR-FB-92-29] p 343 N93-31229

Phases of the project development and examination methodologies p 343 N93-31231

The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 N93-31233

The clearance test: A computer generated process for acquisition of auditive short term sensitivity p 343 N93-31234

The PARAT tests as examination system p 344 N93-31238

### RAULIN, FRANCOIS

Titan p 114 N93-18553

### RAUNIG, D. L.

Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 N93-17697

### RAUP, DAVID M.

Geography of end-Cretaceous marine bivalve extinctions p 273 A93-41075

### RAVEN, P. B.

Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721

### RAVEN, PETER B.

Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221

### RAWAL, S. B.

Changes in body fluid compartments during hypohydration and rehydration in heat-acclimated tropical subjects p 251 A93-35496

### RAWICZ, ANDREW H.

Modelling and simulation of human retinal vision processing p 335 N93-30269

### RAY, CHARLES

Environmental control and life support system p 311 N93-27718

### RAY, CHARLES D.

Environmental control and life support systems p 314 N93-27858

### RAY, PAUL S.

Effects of fatigue and heat stress on vigilance of workers in protective clothing p 177 A93-27173

### RAY, R. J.

A membrane-based subsystem for water-vapor recovery from plant-growth chambers [NASA-CR-177602] p 149 N93-20065

### RAY, ROD

Operation of a breadboard liquid-sorbent/membrane-contactor system for removing carbon dioxide and water vapor from air [SAE PAPER 921321] p 304 A93-41483

A novel membrane device for the removal of water vapor and water droplets from air [SAE PAPER 921322] p 304 A93-41484

### RAYLE, DAVID L.

Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*) p 329 A93-44941

### RAZDAN, RIKKI

Eye slaved pointing system for teleoperator control p 101 A93-19090

### RAZINKIN, S. M.

Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252

### REA, M. A.

Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms [AD-A259803] p 217 N93-23459

### READ, MAJORIE S.

Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 N93-29620

### REAMS, G. G.

An analysis of a sustained flight operation training mission in Navy attack aircraft [AD-A258199] p 131 N93-18205

### REBA, R. C.

Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 N93-28835

### REBHOLZ, PATRICK J.

Lunar base requirements for human habitability p 345 A93-41995

Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 N93-18156

### REDDICK, ROBERT L.

Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 N93-29620

### REDDIX, MICHAEL D.

Effects of laser glare on visual search performance p 180 A93-28158

### REDILLA, CHRISTI L.

Design of a resistive exercise device for use on the Space Shuttle [NASA-CR-192079] p 108 N93-17805

### REDZHEBOVA, O. K.

Effect of hypoxic hypoxia on the immune response and some factors of nonspecific resistance of human and animal organisms p 325 A93-43074

### REE, MALCOLM J.

Structured interviews for pilot selection - No incremental validity p 286 A93-39572

Predicting aircrew training performance with psychometric g [AD-A264021] p 340 N93-30026

### REED, CHARLES

Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443

### REED, K. M.

Evaluation of test methods and requirements for respiratory protection systems 21 [AD-A262466] p 317 N93-28757

### REEVES, D. L.

The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB [AD-A254840] p 27 N93-12432

### REEVES, J. T.

Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574

### REEVES, JOHN T.

Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685

Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043

Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120

Beta-adrenergic blockade and lactate metabolism during exercise at high altitude p 334 N93-29820

### REFINETTI, ROBERTO

Measurement of behavioral thermoregulation [PB92-217033] p 172 N93-21046

### REGAL, DAVID M.

Toward a flight deck automation philosophy for the Boeing High Speed Civil Transport [SAE PAPER 921133] p 291 A93-41321

### REGAN, D.

Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size p 224 A93-32788

Sensory sensitivities and discriminations and their roles in aviation [AD-A259742] p 224 N93-23479

### REGIAN, J. WESLEY

A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks p 367 N93-32151

### REHBEIN, TRACY L.

Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551

### REHEL, RON

Cardiovascular responses during recovery from exercise and thermal stress p 212 A93-30282

### REID, IAN D.

A modular head/eye platform for real-time reactive vision [OUEL-1941/92] p 320 N93-28897

### REINECKE, MICHAEL

The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork [AD-A256192] p 69 N93-14520

### REINSTEIN, D. K.

Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028

### REISING, JOHN

The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork [AD-A256192] p 69 N93-14520

### REISING, JOHN M.

Target designation in a perspective view, 3-D map using a joystick, hand tracker, or voice p 186 A93-27145

3-D target designation using two control devices and an aiding technique p 408 A93-53120

### REMINGTON, BRIAN

Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems [SAE PAPER 921258] p 299 A93-41428

### REMINGTON, RANDY

Design of a radiator shade for testing in a simulated lunar environment [NASA-CR-192080] p 108 N93-17710

### REMINGTON, ROGER W.

Involuntary attentional capture by abrupt onsets p 97 A93-17974

### RENDON, LISA R.

Metabolic responses to simulated extravehicular activity [SAE PAPER 921303] p 282 A93-41468

### RENNER, G. F.

Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) [AD-A253393] p 30 N93-10217

### RESCHKE, M. F.

Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750

Salivary total protein and experimental Coriolis sickness p 383 A93-49573

### RESCHKE, MILLARD F.

Statistical prediction of space motion sickness p 403 A93-55943

### RETAT, I.

Cardiovascular stress test with non-invasive techniques p 221 N93-24399

### RETHKE, DONALD W.

Test of the Shuttle Extended Duration Orbiter (EDO) Waste Collection Subsystem (WCS) [SAE PAPER 921346] p 305 A93-41505

### REVZIN, A. M.

A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321

### REYNOLDS, D. B.

An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128

### REYNOLDS, K. H.

Preliminary design study of lunar housing configurations p 106 N93-17443

### REYNOLDS, RAY T.

Habitable zones around main sequence stars p 197 A93-28376

Europa: Prospects for an ocean and exobiological implications p 113 N93-18552

### RHOADS, TIM

Microbiological methods for the water recovery systems test, revision 1.1 [NASA-CR-184390] p 64 N93-12966

### RHODES, J. W.

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 [DE92-040153] p 41 N93-13503

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 [DE92-040152] p 41 N93-13520

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 N93-16166

### RIBAK, J.

Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729

### RIBEIRO, N. L.

Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force p 369 N93-32255

### RICCI, JUAN C. D.

Magnetic domain state and coercivity predictions for biogenic greigite (Fe<sub>3</sub>S<sub>4</sub>) - A comparison of theory with magnetosome observations p 38 A93-16481

### RICCIO, GARY E.

Virtually induced motion sickness in virtual environments p 381 A93-49401

### RICE, MALCOLM J.

Pilot Candidate Selection Method (PCSM): What makes it work? [AD-A262871] p 340 N93-29481

# PERSONAL AUTHOR INDEX

## RICE, VALERIE J.

- The effects of Benadryl and Hismanal on mood, physiological measures, antihistamine detection, and subjective symptoms p 385 A93-52302  
The effects of Benadryl and Hismanal on psychomotor performance and perceived performance p 385 A93-52303

## RICHALET, JEAN-PAUL

- Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 A93-14973  
Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects p 93 A93-20035  
Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans p 332 A93-44180

## RICHARD, ELIZABETH E.

- Space Station Freedom Environmental Health Care Program [SAE PAPER 921138] p 292 A93-41325

## RICHARD, R.

- Lipodystrophies in the French military flight crew p 362 A93-32249

## RICHARDS, MARVIN

- Improving manikin biofidelity p 142 A93-19668

## RICHARDS, MICHAEL J.

- Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training p 98 A93-18773

## RICHARDS, R. B.

- Ground based simulation in test and evaluation education [AIAA PAPER 92-4066] p 24 A93-11252

## RICHARDSON, U. I.

- Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028

## RICHARDSON, W. G.

- Prevention of cumulative trauma disorders [PB93-188332] p 338 A93-31138

## RICHLET, J. P.

- Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567

## RIDDLE, JEANNE

- Blood and urine responses to ingesting fluids of various salt and glucose concentrations p 83 A93-17528

## RIDDLE, JEANNE M.

- Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530  
Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551

## RIJKEN, P. J.

- Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715

## RIJKEN, PHILIP J.

- Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214

## RIKHIREVA, G. T.

- Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

## RILEY, D. A.

- Distinguishing unloading- versus reloading-induced changes in rat soleus muscle p 157 A93-28763

## RILEY, GARY

- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 A93-25595

## RILEY, VICTOR

- A systems analysis to identify human factors issues and requirements for data link p 186 A93-27153

## RIMPILAEINEN, M.

- Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 A93-28199

## RINDT, JOHN R.

- Plasma reactor waste management systems p 68 A93-14000

## RIOS, F.

- Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 A93-32253

## RIPOLL, A.

- A new generation of astronauts in space - The astronaut selection process p 57 A93-17071

## RISER, DANIEL T.

- Development of measures of crew coordination [AD-A255384] p 70 A93-14651

## RISIKKO, TANJA

- Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 A93-21161

## RITCHIE, NICOLE A.

- Requirements for an automated human factors, manpower, personnel, and training (HMPT) planning tool [AD-A258531] p 195 A93-21753

## RITTER, LESLIE S.

- Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle p 399 A93-55458

## RITTER, RICHARD D.

- 'And we were tired' fatigue and aircrew errors p 264 A93-37070

## RITTER, ROXANE M.

- Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations [DOT/FAA/AM-93/7] p 274 A93-27152  
Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations [DOT/FAA/AM-93/8] p 283 A93-27158

## RIZZETTO, MARIO

- Clinical types of Hepatitis B p 15 A93-11286

## ROACH, JOSEPH F.

- Studies of a laser/nuclear thermal hardened body armor [AD-A255128] p 34 A93-12423

## ROACH, R. C.

- Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493  
Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494  
Nifedipine for treatment of high altitude pulmonary edema [AD-A256959] p 95 A93-16187

## ROBBINS, DAVID O.

- Analysis of retinal function following laser irradiation [AD-A255649] p 52 A93-14163

## ROBBINS, DONALD E.

- Radiological assessment for Space Station Freedom [NASA-TM-104758] p 128 A93-20303

## ROBE, R. Q.

- Evaluation of Night Vision Goggles (NVG) for maritime search and rescue (joint Canadian/US Coast Guard experiment) [AD-A255525] p 70 A93-14554  
Evaluation of Night Vision Goggles (NVG) for maritime search and rescue [AD-A257704] p 107 A93-17697

## ROBERSON, BOBBY J.

- Development of a pyrolysis waste recovery model with designs, test plans, and applications for space-based habitats p 267 A93-26076

## ROBERSON, WILLIAM C.

- A study of decision making and performance in rejected takeoffs [SAE PAPER 921134] p 287 A93-41322

## ROBERTS, A. K.

- The design and use of automotive crash test dummies p 142 A93-19669

## ROBERTS, D. E.

- Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 A93-12145  
Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 A93-24021

## ROBERTS, JACK C.

- The design of mechanically compatible fasteners for human mandible reconstruction p 253 A93-25569

## ROBERTS, M.

- Inflatable habitation for the lunar base p 106 A93-17442

## ROBINETT, WARREN

- A computational model for the stereoscopic optics of a head-mounted display p 390 A93-49393  
Synthetic experience - A proposed taxonomy p 390 A93-49398

## ROBINETTE, KATHLEEN M.

- Anthropometry for HMD design p 229 A93-30069  
Methods for characterizing the human head for the design of helmets [AD-A263875] p 353 A93-29889

## ROBINSON, M. C.

- Design and evaluation of a payload to support plant growth onboard COMET 1 [SAE PAPER 921389] p 308 A93-41547

## ROBITAILLE, H. A.

- Lunar base CELSS: A bioregenerative approach p 67 A93-13993

## ROBLER, DWIGHT A.

- A toposcopic investigation of brain electrical activity induced by motion sickness [AD-A259024] p 124 A93-18952

# ROGERS, WENDY A.

## ROCHA, CARLOS J.

- Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 A93-17448

## ROCHOWIAK, DANIEL M.

- The ECLSS advanced automation project evolution and technology assessment p 312 A93-27723

## ROCK, N.

- Occupant kinematics simulation of the Kegworth air accident p 142 A93-19662

## ROCK, P. B.

- Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574

## ROCK, PAUL B.

- Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685  
Operation Everest II - Gas tensions in expired air and arterial blood at extreme altitude p 117 A93-24043

## ROCKER, LOTHAR

- Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495

## RODE, BERND M.

- Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792

## RODE, T.

- Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 A93-32261

## RODGERS, E. B.

- Aquatic biotfilms and their responses to disinfection and invading species [SAE PAPER 921211] p 296 A93-41387

## RODGERS, MARK D.

- Accident proneness: A research review [DOT/FAA/AM-93/9] p 288 A93-28622

## RODGERS, SANDRA L.

- Utilization of the graded universal testing system to increase the efficiency for assessing aerobic and anaerobic capacity p 246 A93-26077

## RODRIGUEZ, C. ALONSO

- Survey of smoking habits in the Spanish Air Force p 370 A93-32262

## ROE, S. P.

- Membrane technology: A search for membranes for submarine atmosphere control [AD-A260581] p 266 A93-25904

## ROEDIG, ERICH

- Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces p 363 A93-32254

## ROEDIGER, HENRY L., III

- Comparing performance on implicit memory tests [AD-A258168] p 131 A93-17921

## ROENNEBERG, TILL

- Two circadian oscillators in one cell p 239 A93-34518

## ROGERS, JOHN S.

- The ECLSS advanced automation project evolution and technology assessment p 312 A93-27723

## ROGERS, STEVEN

- Computerized task battery assessment of cognitive and performance effects of acute phenytoin motion sickness therapy p 211 A93-30278

## ROGERS, STEVEN K.

- Spectral analysis of the electroencephalographic response to motion sickness p 116 A93-24041

## ROGERS, TOM D.

- Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process [SAE PAPER 921234] p 297 A93-41408  
Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process [SAE PAPER 921275] p 301 A93-41444  
Alternative processes for water reclamation and solid waste processing in a physical/chemical bioregenerative life support system p 311 A93-27721

## ROGERS, W. R.

- Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 A93-16166  
Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates [DE93-007677] p 207 A93-22913

## ROGERS, WENDY A.

- Contextual change and skill acquisition in visual search - Does the rate of change affect performance? p 178 A93-27187

## ROGERS, WILLIAM H.

Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks  
[AD-A257711] p 100 N93-17684

### ROGERS, WILLIAM H.

High level organizing principles for display of systems fault information for commercial flight crews  
p 388 A93-52187

### ROGOWITZ, BERNICE E.

Human vision, visual processing, and digital display II: Proceedings of the Meeting, San Jose, CA, Feb. 27-Mar. 1, 1991  
[SPIE-1453] p 137 A93-25363

### ROHATGI, NARESH

Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems  
[SAE PAPER 921120] p 290 A93-41312

### ROHATGI, NARESH K.

Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management  
[SAE PAPER 921119] p 290 A93-41311

### ROLLAND, JANNICK P.

A computational model for the stereoscopic optics of a head-mounted display  
p 390 A93-49393

### ROMANO, L.

Vaccination against Hepatitis B: The Italian strategy  
p 15 N93-11289

### ROMERO, J. J. CANTON

Survey of smoking habits in the Spanish Air Force  
p 370 N93-32262

### ROSARIO, JOSE

Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment  
[AD-A259909] p 235 N93-23995

### ROSCOE, A. H.

Assessing pilot workload - Why measure heart rate, HRV and respiration?  
p 168 A93-28741

### ROSE, R. M.

Results of a structured psychiatric interview to evaluate NASA astronaut candidates  
p 223 A93-32780

### ROSEKIND, MARK R.

Age, circadian rhythms, and sleep loss in flight crews  
p 211 A93-30276

### ROSENBERG, CRAIG

The effect of geometric field of view and tunnel design for perspective flight-path displays  
[SAE PAPER 921131] p 291 A93-41319

### ROSENTHAL, TALMA

Acute hypertensive response to +Gz acceleration in mildly hypertensive pilots  
p 386 A93-52307

### ROSHCHINA, N. A.

Psychophysiological studies of acute hypoxic hypoxia  
p 91 A93-18417

### ROSQVIST, R.

Plasmid encoded virulence of Yersinia  
[FOA-B-40419-4.4] p 275 N93-28199

### ROSQVIST, ROLAND

Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption  
[FOA-B-40420-4.4] p 275 N93-27989

### ROSS, IAN

Aircrew acceptance of automation in the cockpit  
p 144 N93-19761

### ROSS, LEONARD E.

Pilot performance with blood alcohol concentrations below 0.04 percent  
p 46 A93-16151

### ROSS, MURIEL D.

Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities  
p 104 A93-20700

### ROSSI, G. B.

HIV variability and perspectives of a vaccine  
p 16 N93-11294

### ROSSIGNOL, M.

Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study  
p 216 A93-32786

### ROSSITTO, F.

A new generation of astronauts in space - The astronaut selection process  
p 57 A93-17071

### ROST, R.

Effects of simulated microgravity (HDT) on blood fluidity  
p 44 A93-14972

### ROTHERAM, MARY

The development of an atmosphere composition monitor for the Environmental Control and Life Support System  
[SAE PAPER 921149] p 292 A93-41333

### ROUEN, MICHAEL N.

Extravehicular activity system  
p 312 N93-27787

### ROUSE, WILLIAM B.

The role of mental models in team performance in complex systems  
p 262 A93-34985

Modeling the dynamics of mental workload and human performance in complex systems  
p 135 N93-19956

Specification of adaptive aiding systems  
[AD-A263071] p 314 N93-27927

### ROWE, JOSEPH

Digest of Russian Space Life Sciences, issue 33  
[NASA-CR-3922(39)] p 244 N93-25195

### ROWE, ROGER

Regional changes in muscle mass following 17 weeks of bed rest  
p 93 A93-20039

### ROWLES, J. M.

Can injury scoring techniques provide additional information for crash investigators?  
p 125 N93-19663

Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident?  
p 125 N93-19664

### ROWLES, JOHN M.

The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989  
p 118 A93-25201

The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989  
p 118 A93-25202

### ROWLEY, DENNIS A.

Flow cytometric analysis of lymphocyte surface markers following a 1-Gy dose of gamma radiation  
p 281 A93-41170

### ROY, ROLAND R.

Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight  
p 272 A93-40548

### ROYDEN, CONSTANCE S.

The perception of heading during eye movements  
p 99 A93-20692

### ROZANOV, V. A.

Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats  
p 242 A93-35670

### RUBIN, CLINTON T.

Training, muscle fatigue and stress fractures  
[AD-A255277] p 54 N93-15006

### RUBIN, YIFAT

Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements  
p 287 A93-40772

### RUDGE, FREDERICK W.

The role of ground level oxygen in the treatment of altitude chamber decompression sickness  
p 89 A93-18043

### RUDISILL, MARIANNE

Display format and highlight validity effects on search performance using complex visual displays  
p 187 A93-27160

Using GOMS models and hypertext to create representations of medical procedures for online display  
p 188 A93-27170

The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN)  
p 258 N93-25595

Evolving technologies for Space Station Freedom computer-based workstations  
p 313 N93-27794

### RUEB, JUSTIN D.

KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713

### RUEKER, FLORIAN

Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1  
p 203 A93-32850

### RUFF-ROBERTS, ALYSON L.

Chloroflexus aurantiacus and ultraviolet radiation - Implications for Archean shallow-water stromatolites  
p 400 A93-55999

### RUFFNER, JOHN W.

Selective factors affecting rotary wing aviator performance with symbology superimposed on night vision goggles  
[AD-A254983] p 35 N93-12508

The effects of superimposing symbology on a simulated night vision goggle display  
[AD-A263458] p 354 N93-30590

### RUKER, F.

Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1  
p 153 A93-28698

### RUMBAUGH, DUANE M.

Cognitive competencies - Products of genes, experience, and technology  
p 201 A93-32113

Learning about primates' learning, language, and cognition  
p 201 A93-32124

Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System  
p 202 A93-32651

## PERSONAL AUTHOR INDEX

Comparative assessment of psychomotor performance - Target prediction by humans and macaques (Macaca mulatta)  
p 204 A93-33035

### RUMIANTSEV, G. V.

Study of the functioning of the central and the peripheral contours of the thermoregulation system using a thermophysical model of the rabbit body  
p 111 A93-23075

Investigation of the character of changes in the 'central' temperature of the body in cold environment, using a rabbit-body thermoregulation model  
p 112 A93-25651

### RUMIANTSEV, V. P.

Engineering and technical support of experiments on board the Cosmos-2044 biosatellite  
p 77 A93-18419

The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness  
p 241 A93-35242

### RUMMEL, JOHN D.

Exobiology: The NASA program  
p 114 A93-18561

### RUMPF, ALEXANDER

User areas in aircraft cockpit, using methods of rapid prototype development  
[MBB-FE-315-S-PUB-0493] p 196 N93-22389

### RUMYANTSEV, G. V.

Adjustable temperature level of a physiological thermostat and the feasibility of its precise maintenance  
p 324 A93-43036

The efficiency of thermoregulatory responses in the cooling of the organism  
p 325 A93-43136

### RUNDELL, JAMES R.

Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus  
p 130 A93-25209

Relating cognitive function to military aviator performance in early HIV infection  
p 17 N93-11298

Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function  
p 18 N93-11299

### RUNNER, K.

Visual specification of robot motion  
p 348 A93-42845

### RUOKANGAS, CORINNE

A decision-theoretic approach to the display of information for time-critical decisions: The Vista project  
p 367 N93-32152

### RUPERT, A.

Medical evaluation of spatial disorientation mishaps  
p 134 N93-19703

### RUPERT, ANGUS H.

Spatial disorientation and dysfunction of orientation/equilibrium reflexes - Aeromedical evaluation and considerations  
p 8 A93-10336

### RUSAK, BENJAMIN

Neurophysiological analysis of circadian rhythm entrainment  
[AD-A264681] p 361 N93-32018

### RUSH, W. L.

Coccidioidomycosis - A persistent threat to deployed populations  
p 380 A93-49228

### RUSSELL, MICHAEL J.

Mineral theories of the origin of life and an iron sulfide example  
p 74 A93-18009

### RUSSO, DANE M.

Space Station Freedom Environmental Health Care Program  
[SAE PAPER 921138] p 292 A93-41325

### RUTA, MARY

Health maintenance facility system effectiveness testing  
[NASA-TM-104737] p 372 N93-32328

### RUTZ, JEFFREY A.

Biofilm formation and control in a simulated spacecraft water system - Three year results  
[SAE PAPER 921310] p 303 A93-41472

### RVACHEV, S. S.

Engineering and technical support of experiments on board the Cosmos-2044 biosatellite  
p 77 A93-18419

### RYAN, ARTHUR M.

Cardiorespiratory measures of workload during continuous manual performance  
p 160 A93-27192

### RYAN, F.

The development of an automated cell culture system for use in space life science research  
p 158 N93-21085

### RYAN, MIRELLE J.

Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy  
p 78 A93-20033

### RYAN, T. G.

Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA  
[DE93-001923] p 321 N93-28942

### RYDER, JOAN M.

Experimental validation of the attention switching component of the COGNET framework  
p 186 A93-27141

- RYKIEL, EDWARD J., JR.**  
Growing wheat to maturity in reduced gas pressures  
[NASA-CR-193245] p 277 N93-29216
- RYKOV, G. A.**  
Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411
- RYLOVA, A. V.**  
Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101
- RYSDYK, R. TH.**  
What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment  
[AIAA PAPER 93-3561] p 406 A93-52661
- RYZHOV, A. I.**  
Microwaves and the visual analyzer p 250 A93-35247

## S

- SAAKIAN, S. G.**  
The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863
- SAAKOV, V. S.**  
Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188
- SABO, V.**  
The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242
- SACHER, R.**  
Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302
- SACHLEBEN, R. A.**  
Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels  
[DE93-007815] p 246 N93-26587
- SACHS, FREDERICK**  
Effect of cytoskeletal reagents on stretch activated ion channels  
[AD-A261089] p 245 N93-25764
- SAEKI, CHIKAKO**  
Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge p 379 A93-49178
- SAETIA, SOMPORN**  
Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792
- SAFAR, M. E.**  
Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716
- SAGAWA, S.**  
Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281
- SAGER, J. C.**  
Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715  
Development of physical and mathematical models for the Porous Ceramic Tube Plant Nutrifcation System (PCTPNS)  
[NASA-TM-107551] p 4 N93-10085  
Engineering verification of the biomass production chamber p 67 N93-13996
- SAGER, JOHN C.**  
Controlled Ecological Life Support System - CELSS p 62 A93-17432
- SAGI-DOLEV, ALYSIA M.**  
New technologies for in-flight tasteless bioelectrodes p 289 A93-41174
- SAGI, JANOS**  
Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560
- SAIKINA, G. P.**  
Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208
- SAINI, J.**  
Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619
- SAITO, MITSURU**  
Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328
- SAJDA, PAUL**  
Computer simulations of object discrimination by visual cortex  
[AD-A253345] p 12 N93-10271

- SAKAI, A.**  
Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560
- SAKAI, AKIO**  
Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats p 75 A93-18039
- SAKARA, L.**  
Cardiovascular risk factors in an Italian Air Force population: Preliminary report p 362 N93-32252
- SAKARA, LORENZO**  
Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school p 368 N93-32248
- SAKHAROV, V. M.**  
Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223
- SAKUMA, HIDETAKE**  
Human factors in the 'glass cockpit' p 27 A93-11202
- SAKURADA, SOHTARO**  
Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 A93-49180
- SAKURAGI, SOKICHI**  
Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398
- SAKURAI, IZO**  
Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 A93-15526
- SALADA, THOMAS**  
Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933
- SALAFIA, W. R.**  
Stimulus presentation formats and measurement techniques for the quantification of target detection performance  
[AD-A258933] p 133 N93-19449
- SALAS, EDUARDO**  
The role of mental models in team performance in complex systems p 262 A93-34985  
Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575
- SALINAS, CARLOS E.**  
Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process  
[SAE PAPER 921234] p 297 A93-41408  
Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process  
[SAE PAPER 921275] p 301 A93-41444
- SALISBURY, DAVID A.**  
The Canadian forces airsickness rehabilitation program, 1981-1991 p 89 A93-18042
- SALTER, CHARLES A**  
The effects of an antijet lag diet p 370 N93-32263
- SALZMAN, EDWIN**  
Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029
- SAMEL, A.**  
Pre-adaptation to shiftwork in space p 386 A93-52403
- SAMEL, ALEXANDER**  
Response of the circadian system to 6 deg head-down tilt bed rest p 117 A93-24045
- SAMPAIO, CARLOS E.**  
Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155
- SAMPSON, JAMES B.**  
The Environmental Symptoms Questionnaire (ESQ): Development and application  
[AD-A264127] p 335 N93-30196
- SAMS, C. F.**  
Alteration in human mononuclear leucocytes following space flight p 165 A93-28705
- SANADA, ESTER**  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179
- SANCHEZ, ROBERT R.**  
Chromaticity and luminance as coding dimensions in visual search p 103 A93-19989  
Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements  
[AD-A262872] p 351 N93-29484
- SANDERS, DONALD C.**  
Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations  
[DOT/FAA/AM-93/7] p 274 N93-27152

- Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations  
[DOT/FAA/AM-93/8] p 283 N93-27158
- SANDERS, J.**  
Functional MRI studies of human vision on a clinical imager  
[DE92-017448] p 49 N93-12566
- SANDLIN, DORAL E.**  
Recovering potable water from wastewater in space platforms by lyophilization  
[SAE PAPER 921323] p 304 A93-41485
- SANDOR, P. B.**  
G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775
- SANDSTROEM, G.**  
Characterization and classification of strains of *Francisella tularensis* isolated in the central Asian focus of the Soviet Union and in Japan  
[FOA-B-40421-4.4] p 275 N93-28200
- SANFILIPPO, ANTHONY J.**  
Baroreflex function and cardiac structure with moderate endurance training in normotensive men p 332 A93-44182
- SANTEE, W. R.**  
Biophysical model for handwear insulation testing  
[AD-A262926] p 320 N93-28884
- SANTY, P. A.**  
Results of a structured psychiatric interview to evaluate NASA astronaut candidates p 223 A93-32780
- SANTY, PATRICIA A.**  
Pharmacologic considerations for Shuttle astronauts p 85 A93-17537
- Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277
- SAPOZHNIKOV, V. M.**  
Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672
- SAPP, WALTER J.**  
Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935
- SARAVANOS, D. A.**  
Optimal design of composite hip implants using NASA technology p 174 N93-22188  
Shape optimization of tibial prosthesis components  
[NASA-CR-191123] p 246 N93-27085
- SARIS, WIM H. M.**  
Energy expenditure climbing Mt. Everest p 92 A93-20031
- SARKISIAN, N. V.**  
The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860
- SARTAIN, J. B.**  
Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- SARTER, NADINE B.**  
Pilot interaction with cockpit automation - Operational experiences with the Flight Management System p 189 A93-27455
- SARYKAYALAR, UMIT**  
Effectiveness of birthdate biorhythm theory on flight accidents p 127 N93-19710
- SASAKI, MITSUO**  
Flight crew sleep during multiple layover polar flights p 380 A93-49226
- SATO, KOZO**  
A trade study method for determining the design parameter of CELSS subsystems  
[SAE PAPER 921198] p 295 A93-41374
- SATO, MIKIO**  
A trade study method for determining the design parameter of CELSS subsystems  
[SAE PAPER 921198] p 295 A93-41374
- SATO, T.**  
Discomfort glare from high-intensity discharge headlamps: Effects of context and experience  
[PB93-174720] p 336 N93-30659
- SATO, TSUNEHISA**  
Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 A93-15526
- SAUER, RICHARD L.**  
A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization  
[SAE PAPER 921210] p 295 A93-41386  
The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality  
[SAE PAPER 921266] p 300 A93-41436

- Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water  
[SAE PAPER 921268] p 300 A93-41438
- Biofilm formation and control in a simulated spacecraft water system - Three year results  
[SAE PAPER 921310] p 303 A93-41472
- Regenerable Microbial Check Valve - Life cycle tests results  
[SAE PAPER 921316] p 303 A93-41478
- Technology development for lunar base water recycling  
p 67 N93-13999
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] p 112 N93-18351
- SAUERBORN, J. P.**  
Advances in miniature projection CRTs for helmet displays p 229 A93-30066
- SAUERWEIN, TIMOTHY A.**  
Evaluating robot procedures and tasks for the flight telerobotic servicer p 187 A93-27156
- SAUMET, J.-L.**  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise  
[NASA-TM-103942] p 255 N93-26138
- SAVAGE-RUMBAUGH, E. S.**  
Cognitive competencies Products of genes, experience, and technology p 201 A93-32113
- SAVAGE, C.**  
Recent regenerative ECLSS technology developments in Europe  
[SAE PAPER 921332] p 304 A93-41493
- SAVAGE, P. D.**  
The General Purpose Work Station, a spacious microgravity workbench  
[SAE PAPER 921394] p 309 A93-41552
- SAVARD, GABRIELLE K.**  
Baroreflex function and cardiac structure with moderate endurance training in normotensive men p 332 A93-44182
- SAVASAN, KEMAL**  
Effectiveness of birthdate biorhythm theory on flight accidents p 127 N93-19710
- SAVCHENKO, B. N.**  
Roentgenophosphene as an indicator of the radiation excitability of the central nervous system p 325 A93-43078
- SAVOST'YANOVA, N. N.**  
Informative value of the respiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors p 248 A93-35222
- Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244
- SAWA, TOSHIO**  
Experimental and theoretical study on membrane distillation using thermoevaporation  
[SAE PAPER 921397] p 309 A93-41554
- SAWLER, ROBERT J.**  
Acoustical and vibratory stimuli interdependencies and their applications in simulation and cue synchronization  
[AIAA PAPER 93-3562] p 406 A93-52662
- SAWYER, HEYWOOD R.**  
Effects of spaceflight on the proliferation of jejunal mucosal cells  
[NASA-CR-191303] p 51 N93-13449
- SCAGGS, T.**  
Visual specification of robot motion p 348 A93-42845
- SCANNELL, DENNIS**  
Ultraviolet disinfection technology assessment  
[PB92-222868] p 64 N93-12983
- SCARBOROUGH, ERIC L.**  
Methods for test and evaluation of night vision goggle integrated helmets p 188 A93-27182
- SCARINGE, ROBERT P.**  
Lightweight passive microclimate cooling device  
[AD-A262262] p 317 N93-28112
- SCATTERGOOD, THOMAS**  
Titan p 114 N93-18553
- SCHAAERSCHMIDT, H.**  
Selection of astronauts for European space missions p 225 N93-24345
- SCHAECHTER, JUDITH D.**  
Tryptophan availability modulates serotonin release from rat hypothalamic slices p 152 A93-27000
- Effect of chronic D-fenfluramine administration on rat hypothalamic serotonin levels and release p 152 A93-27049
- Serotonin release varies with brain tryptophan levels p 201 A93-32119
- SCHAEFER, REINHARD**  
Hermes ECLSS - Main requirements and technical solutions  
[SAE PAPER 921400] p 309 A93-41555
- SCHAEFER, RON**  
Medical care on the moon p 331 A93-42126

**SCHAFER, LAUREN E.**

- A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests  
[SAE PAPER 921154] p 293 A93-41337

**SCHAGERIN, ROBERT**

- For space suits - The multifunction pressure reducer-regulator of Intertechnique p 61 A93-15057

**SCHIEBLE, O. KARL**

- Ultraviolet disinfection technology assessment  
[PB92-222868] p 64 N93-12983

**SCHULTENS, PHILIP J.**

- Modelling and simulation of human retinal vision processing p 335 N93-30269

**SCHENKER, P. S.**

- Operator performance with alternative manual control modes in teleoperation p 390 A93-49397

**SCHENKER, PAUL**

- A teleoperation training simulator with visual and kinesthetic force virtual reality p 233 A93-33448

**SCHENKER, PAUL S.**

- Fusing human and machine skills for remote robotic operations p 137 A93-24994
- Interactive and cooperative sensing and control for advanced teleoperation p 391 A93-49443

**SCHERER, H.**

- Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 386 A93-52405

**SCHERTZ, WILLIAM W.**

- Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309

**SCHIAFFINO, STEFANO**

- Myosin and troponin changes in rat soleus muscle after hindlimb suspension p 273 A93-41124

**SCHILL, W. B.**

- Sperm motility under conditions of weightlessness p 156 A93-28730

**SCHINK, BERNHARD**

- Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280

**SCHIPANI, S. P.**

- System for generating dynamic video imagery for human factors research  
[AD-A248675] p 31 N93-11743

**SCHLAGER, KENNETH J.**

- Transcutaneous Analyte Measuring Methods (TAMM), phase 2  
[AD-A256327] p 54 N93-15192
- Transcutaneous analyte measuring methods  
[AD-A262861] p 333 N93-29509

**SCHLITT, H. A.**

- A weighted iterative algorithm for neuromagnetic imaging  
[DE92-040244] p 51 N93-13522

**SCHLUTER, M. D.**

- Effect of spaceflight on human protein metabolism p 360 A93-47097

**SCHMEGNER, I. F.**

- Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates  
[AD-A262762] p 285 N93-28939

**SCHMIDT, DANIEL J.**

- Helmet visor support apparatus  
[AD-D015684] p 351 N93-29606
- Goggles emergency release apparatus  
[AD-D015685] p 351 N93-29607

**SCHMIDT, F.**

- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables  
[AD-A254681] p 27 N93-12225

**SCHMIDT, G. W.**

- Nitrogen control of chloroplast development and differentiation  
[DE92-017392] p 39 N93-12768

**SCHMIDT, GREG K.**

- The General Purpose Work Station, a spacious microgravity workbench  
[SAE PAPER 921394] p 309 A93-41552

**SCHMIDT, J.**

- Effect of dexamethasone on proliferating osteoblasts - Inhibition of prostaglandin E2 synthesis, DNA synthesis, and alterations in actin cytoskeleton p 155 A93-28728

**SCHMIDT, R.**

- The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555

**SCHMIDT, W.**

- Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191

**SCHMITT, HARRISON H.**

- Pressure suit requirements for moon and Mars EVA's p 346 A93-42123
- The real world and lunar base activation scenarios p 68 N93-14014

**SCHMITZ, ERIC**

- Initial experiments on the end-point control of a 2-DOF long-reach elastic manipulator p 183 A93-27024

**SCHNEIDER, VICTOR**

- Can the adult skeleton recover lost bone? p 93 A93-20656

**SCHNEIDER, VICTOR S.**

- Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039
- Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545

**SCHNELL, SYLVIA**

- Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280

**SCHNIDER, P.**

- AUDIMIR - Directional hearing at microgravity p 159 A93-26570

**SCHNITZLER, BRUCE G.**

- Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817

**SCHNORR, T. M.**

- Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers p 168 A93-28739

**SCHOEN, A.**

- Mir 1992 operations and crew training p 226 N93-24352

**SCHOPF, J. W.**

- Microfossils of the Early Archean Apex chert - New evidence of the antiquity of life p 272 A93-40308

**SCHOR, ROBERT H.**

- Neural processing of gravity information  
[NASA-CR-192766] p 209 N93-23233

**SCHROEDER, DAVID J.**

- Contribution of personality to the prediction of success in initial air traffic control specialist training  
[DOT/FAA/AM-93/4] p 259 N93-26138

**SCHROEDER, W. F.**

- Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 171 A93-28765

**SCHUBERT, FRANZ H.**

- An update on the readiness of vapor compression distillation for spacecraft wastewater processing  
[SAE PAPER 921114] p 290 A93-41307

**SCHUETZE, HARALD**

- Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress p 401 A93-55165

**SCHULTHEIS, LEX**

- The mechanical control system of bone in weightless spaceflight and in aging p 94 A93-20657
- Artificial gravity augmentation on the moon and Mars p 346 A93-42127

**SCHULTZ, E.**

- A simple hindlimb suspension apparatus p 398 A93-55168

**SCHULTZ, JOHN R.**

- Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water  
[SAE PAPER 921268] p 300 A93-41438
- Biofilm formation and control in a simulated spacecraft water system - Three year results p 303 A93-41472
- Technology development for lunar base water recycling p 67 N93-13999

**SCHULZ, H.**

- Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681
- Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682

- Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683

- The effects of a 10-day period of head-down tilt on the cardiovascular responses to intravenous saline loading p 163 A93-28686

**SCHULZ, J. R.**

- An integrated human/plant metabolic mass balance model p 347 A93-42130

**SCHULZ, JON**

- A systems approach to water recycling research p 347 A93-42149

**SCHULZ, JON R.**

- Contaminant distribution and accumulation in water recycle systems  
[SAE PAPER 921360] p 307 A93-41519
- Space habitat environmental health - A systems issue p 347 A93-42151

**SCHULZE, ARTHUR E.**

- Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 N93-23082



- SCHUTTE, PAUL C.**  
High level organizing principles for display of systems fault information for commercial flight crews p 388 A93-52187  
Human-centered automation and AI - Ideas, insights, and issues from the Intelligent Cockpit Aids research effort p 407 A93-52764
- SCHUTTE, W.**  
Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium p 108 A93-17824
- SCHWARTZ, ALAN W.**  
Nucleotide analogs based on pentaerythritol - An hypothesis p 325 A93-43794
- SCHWARTZ, DEBORAH E.**  
Exobiology in Solar System Exploration [NASA-SP-512] p 112 N93-18545  
Overview: Exobiology in solar system exploration p 112 N93-18546
- SCHWARTZ, ERIC L.**  
Computing with neural maps: Application to perceptual and cognitive function [AD-A264056] p 341 N93-30033
- SCHWARTZKOPF, S.**  
Crop interactions in polyculture and their implications for CELSS design [SAE PAPER 921197] p 295 A93-41373  
Hazard and risk assessment for surface components of a lunar base Controlled Ecological Life Support System [SAE PAPER 921285] p 302 A93-41451
- SCHWARTZKOPF, S. H.**  
Gray water recycling with a unique vapor compression distillation (VCD) design [SAE PAPER 921318] p 304 A93-41480
- SCHWARTZKOPF, STEVEN H.**  
Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems [SAE PAPER 921272] p 301 A93-41442  
Space life support technology applications to terrestrial environmental problems p 265 N93-25617
- SCHWARZ, RAY P.**  
Method for culturing mammalian cells in a perfused bioreactor [NASA-CASE-MSC-21293-2] p 4 N93-10109  
Method for culturing mammalian cells in a horizontally rotated bioreactor [NASA-CASE-MSC-21294-2] p 5 N93-10110
- SCHWEICKART, RANDOLPH W.**  
Measurement of free and dissolved gas content of water samples on Space Station Freedom [SAE PAPER 921267] p 300 A93-41437
- SCHWEYEN, RUDOLF J.**  
Group II intron RNA catalysis of progressive nucleotide insertion - A model for RNA editing p 398 A93-55292
- SCOTT, ALLAN W.**  
Understanding microwaves [ISBN 0-471-57567-4] p 357 A93-46300
- SCOTT, BRYAN**  
Catalytic oxidation for treatment of ECLSS and PMMS waste streams [SAE PAPER 921274] p 301 A93-41443
- SCOTT, CHARLES D.**  
Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309
- SCOTT, D. P.**  
Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 N93-12145  
Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 N93-24021
- SCOTT, MICHAEL A.**  
Active vibration damping of the Space Shuttle remote manipulator system p 231 A93-31993  
Human-in-the-loop evaluation of RMS Active Damping Augmentation [AIAA PAPER 93-3875] p 393 A93-51460
- SCOTTO, P.**  
Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493  
Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494
- SCOUT, TERRA**  
United States Army space experiment 601 [AD-A261460] p 260 N93-26353
- SEAGRAVE, RICHARD C.**  
Space life support engineering program [NASA-CR-192188] p 141 N93-19039
- SEALS, DOUGLAS R.**  
Tissue-specific noradrenergic activity during acute heat stress in rats p 323 A93-42193
- SEARLE, DANIEL**  
Adaptive autonomous target cueer p 148 N93-19784
- SEBASTIAN, LISA A.**  
Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats p 323 A93-42192
- SEDBON, GILBERT**  
Looks can kill p 231 A93-31626
- SEERY, RONALD E.**  
Helmet Mounted Display symbology integration research p 263 A93-35914
- SEGERER, ANDREAS H.**  
Life in hot springs and hydrothermal vents p 243 A93-36559
- SEGIZBAEVA, M. O.**  
Control of breathing under conditions of altered atmospheric density during muscular work p 89 A93-18288
- SEIBEL, MACHELLE M.**  
Melatonin in human preovulatory follicular fluid p 215 A93-32474
- SEIBERT, M.**  
Primary charge separation in isolated photosystem 2 reaction centers [DE92-041128] p 82 N93-17189
- SEIDLER, KAREN S.**  
Distance and organization in multifunction displays p 102 A93-19986
- SEIFU, S.**  
Ground-based control of Space Station Freedom-based robots p 263 A93-35570
- SEIGNEURIC, A.**  
Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304  
Lipodystrophies in the French military flight crew p 362 N93-32249
- SEILER, FRITZ A.**  
Beryllium toxicity - An update p 104 A93-20779
- SEKIGUCHI, C.**  
Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572
- SEKIGUCHI, CHIHARU**  
Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220
- SEKIGUCHI, M.**  
High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709
- SELCON, S. J.**  
Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation p 175 A93-27139  
Operator and automation capability analysis: Picking the right team p 319 N93-28864
- SELF, HERSCHEL C.**  
A tutorial on exit pupils and eye rotation with virtual image optical displays [AD-A262399] p 333 N93-29400
- SELIVRA, A. I.**  
Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287
- SELLAND, M. A.**  
Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493  
Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494
- SELVAKUMAR, S.**  
Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide p 271 A93-39707
- SEMEANOVA, T. D.**  
Data bank establishment principles as applied to the problem of physiological norms in space medicine p 249 A93-35234
- SENDA, KEI**  
Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot [AIAA PAPER 93-3863] p 392 A93-51449
- SENNE-DUFF, BETH**  
The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas p 369 N93-32257
- SENO, SHIGEKAI**  
On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791
- SENSERY, JONATHAN A.**  
Concrete lunar base investigation p 107 N93-17445
- SEO, HISAO**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029
- SERAJI, HOMAYOUN**  
Remote surface inspection system p 410 A93-55469
- SEREBROVSKAIA, TAT'IANA V.**  
Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028
- SERFOSS, GARY L.**  
Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight [AD-A264661] p 341 N93-30542
- SEROUENNE, C.**  
Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567
- SEROVA, L. V.**  
Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935
- SESHAN, P. K.**  
Overview of NASA's 1991 Life Support Systems Analysis Workshop [SAE PAPER 921118] p 290 A93-41310  
Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management [SAE PAPER 921119] p 290 A93-41311  
Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems [SAE PAPER 921120] p 290 A93-41312
- SESSLER, DANIEL I.**  
Limited heat transfer between thermal compartments during rewarming in vasoconstricted patients p 88 A93-18036
- SETH, N.**  
Visual specification of robot motion p 348 A93-42845
- SEVERAC, ALEXANDRA**  
Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161
- SEXAUER, ROGER N.**  
A low pressure electrolyzer for the next generation submarine [SAE PAPER 921125] p 291 A93-41316
- SHAFTO, MICHAEL G.**  
Human support for Mars exploration - Issues and approaches p 27 A93-12077
- SHAH, ASHWIN R.**  
Probabilistic simulation of the human factor in structural reliability p 365 N93-31573
- SHAHED, ASHA R.**  
Acceleration-induced effects on baboon blood chemistry p 376 A93-49224
- SHAINSKAIA, ALLA M.**  
Ion transport across membranes under exposure of the organism to ionizing radiation [ISBN 5-12-001601-4] p 243 A93-35679
- SHAIYMOV, B. K.**  
Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis p 39 A93-16750
- SHAKULA, A. V.**  
Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel p 257 A93-36744
- SHALIMOV, P. M.**  
The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit p 10 A93-12969
- SHAMISS, ARIE**  
Acute hypertensive response to +Gz acceleration in mildly hypertensive pilots p 386 A93-52307
- SHAMS, T.**  
Microcomputer based software for biodynamic simulation p 196 N93-22191
- SHANAHAN, DENNIS**  
Fatal mishap report - First SPH-4B flight helmet recovered from a U.S. Army helicopter mishap p 393 A93-52308
- SHANSKY, J.**  
Mechanically induced alterations in cultured skeletal muscle growth p 202 A93-32749
- SHANSKY, JANET**  
Mechanical stimulation of skeletal muscle increases prostaglandin F2(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism [NASA-CR-193041] p 282 N93-27102
- SHAPIRO, JOSEPH I.**  
Metabolic factors influencing myocardial recovery from acidosis (CiC3) [AD-A252376] p 14 N93-10796
- SHAPOSHNIKOV, E. A.**  
The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241

## SHAPPELL, S. A.

### SHAPPELL, S. A.

- Effects of dextromethamphetamine on subjective fatigue  
[AD-A258252] p 119 N93-17822  
Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm  
[AD-A259243] p 171 N93-20580  
Simulated sustained flight operations and performance. Part 1: Effects of fatigue  
[AD-A261012] p 266 N93-25859

### SHAPPELL, SCOTT A.

- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm  
[AD-A258146] p 122 N93-18292  
The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm  
[AD-A258156] p 132 N93-18294

### SHARAN, M.

- Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide  
p 271 A93-39707

### SHARAPOV, O. I.

- Intraslow bioelectric activity of the monkey's brain in the development of the high-pressure neural syndrome  
p 75 A93-18286  
The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys  
p 75 A93-18289

### SHARER, PETER J.

- Metabolic responses to simulated extravehicular activity  
[SAE PAPER 921303] p 282 A93-41468

### SHARKEY, PAUL M.

- A modular head/eye platform for real-time reactive vision  
[OUEL-1941/92] p 320 N93-28897

### SHARKEY, THOMAS J.

- Spatial orientation and dynamics in virtual reality systems - Lessons from flight simulation p 178 A93-27185  
Cybersickness - Perception of self-motion in virtual environments p 381 A93-49402  
A demonstration of motion base design alternatives for the National Advanced Driving Simulator  
[NASA-TM-103881] p 236 N93-24490  
Autonomic physiological data associated with simulator discomfort  
[NASA-CR-177609] p 222 N93-24738

### SHARRATT, M.

- Respiratory response to varying degrees of tilt and lower body negative pressure p 173 N93-21114

### SHASHKOV, V. S.

- Hemodynamic status of humans during a graded orthostatic test p 248 A93-35221

### SHATTUCK, PAUL L.

- Flight Telerobotic Servicer legacy p 190 A93-29106  
Flight Telerobotic Servicer legacy  
[AIAA PAPER 93-1157] p 231 A93-31032

### SHAW, R. G.

- Space Station Water Processor - Current flight design  
[SAE PAPER 921112] p 289 A93-41306

### SHAW, S.

- Does drinking protect against mountain sickness?  
p 382 A93-49565

### SHCHERBINSKII, V. V.

- Psychophysiological factors which impair the professional reliability of a pilot in emergency situations  
p 129 A93-23150

### SHCHIPANOVA, I. N.

- Ozone - A new aspect of its effect on microorganisms  
p 398 A93-54971

### SHEA, J. D.

- Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781

### SHEBELA, A.

- Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773

### SHEBILSKIE, WAYNE

- A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks  
p 367 N93-32151

### SHEIKH-ZADE, IU. R.

- Vagotropic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749

### SHEKHOVTSOV, I. K.

- Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333

### SHELLENBERGER, KATHY

- Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933

### SHELTON, ROBERT O.

- An accelerated training method for back propagation networks  
[NASA-CASE-MSC-21625-1] p 340 N93-29610

### SHEN, SHILIANG

- Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat p 327 A93-44844

### SHEN, XIAN-YUN

- The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690  
Cardiovascular problems during space flight  
p 213 A93-30445

### SHEN, XIANYUN

- Changes of REG during 4h head-down bed-rest  
p 46 A93-16075  
Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness  
p 327 A93-44842

### SHENHAR, JORAM

- Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms  
p 101 A93-18710

### SHENKER, MARTIN

- Helmet-mounted area of interest p 228 A93-30060  
Helmet-mounted area-of-interest display  
[AD-A258275] p 139 N93-18029

### SHEPARD, D. R.

- Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703

### SHERIDAN, THOMAS

- Virtual display aids for teleoperation  
p 183 A93-27029

### SHERIDAN, THOMAS B.

- World model and its uncertainty in supervisory robot control p 183 A93-27027  
Automation, authority and angst - Revisited  
p 185 A93-27127

### SHERMAN, LOUIS A.

- Biomass productivity and sustainability of a bioregenerative life-support system  
[SAE PAPER 921359] p 307 A93-41518

### SHETTY, K. J.

- Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects  
p 281 A93-41125

### SHI, X.

- Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721

### SHI, XIANGRONG

- Effects of dynamic exercise on cardiovascular regulation during lower body negative pressure  
p 281 A93-41168

- Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221

### SHI, YIHAO

- The development of a visual color checkerboard stimulator p 30 A93-13723

### SHI, ZHIZHEN

- Protection of Acanthopanax senticosus against suspension-induced bone loss in rats p 2 A93-13528  
Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat p 327 A93-44844

### SHIELDS, BOBBY L.

- EVA Glove Research Team  
[NASA-CR-193014] p 313 N93-27847

### SHILENKO, M. P.

- Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms p 101 A93-18418

### SHILINA, M. N.

- The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys  
p 75 A93-18289

### SHIMAMOTO, MIKE S.

- TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development  
p 367 N93-32112

### SHIMANSKAIA, E. I.

- Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

### SHINN, J. L.

- Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073  
Human exposure to galactic cosmic rays in space  
p 410 A93-54887

### SHINN, JUDY L.

- Target fragmentation in radiobiology  
[NASA-TM-4408] p 124 N93-18381

### SHIPLEY, BUFORD W., JR.

- Hybrid 2 and hybrid 3 dummy neck properties for computer modeling  
[AD-A255544] p 66 N93-13874

### SHIPLEY, DEREK E.

- LIAC - A closed ecosystem research facility  
p 347 A93-42129

### SHIPLEY, DEREK E.

- Autonomous support for microorganism research in space  
[NASA-CR-192062] p 83 N93-17780

### SHIPOV, A. A.

- A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite p 240 A93-35215  
Turning-over reaction during free fall in labyrinthectomized rats after a flight on the Cosmos 936 biosatellite p 241 A93-35246

### SHIRAIISHI, ATSUSHI

- Concept of waste transferring mechanisms  
[SAE PAPER 921239] p 297 A93-41412

### SHIRAKI, K.

- Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281

### SHIRES, D. R.

- System for generating dynamic video imagery for human factors research  
[AD-A248675] p 31 N93-11743

### SHIRUMALLA, SHRAVAN

- Motion planning of a dual-arm free-floating manipulator with inertially fixed base  
[AIAA PAPER 93-3864] p 393 A93-51450

### SHISHOV, A. A.

- New aspects of using hyperbaric oxygenation in aviation medicine p 252 A93-36742

### SHIU, Y. C.

- Visual specification of robot motion  
p 348 A93-42845

### SHKURAT, T. P.

- Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

### SHLYKOV, V. IU.

- Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653

### SHOCK, EVERETT L.

- Chemical environments of submarine hydrothermal systems p 74 A93-18005  
Hydrothermal organic synthesis experiments  
p 74 A93-18007

### SHOEMAKER, K.

- Future research p 74 A93-18010  
Hydrothermal dehydration of aqueous organic compounds p 397 A93-53291

### SHOEMAKER, K.

- Hydrothermal organic synthesis experiments  
[NASA-CR-191257] p 41 N93-13457

### SHOEMAKER, K.

- Respiratory response to varying degrees of tilt and lower body negative pressure p 173 N93-21114

### SHOFNER, WILLIAM P.

- Auditory processing of complex sounds across frequency channels  
[AD-A253612] p 13 N93-10650

### SHOJAKU, H.

- Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572

### SHOJI, TAKATOSHI

- Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398

### SHONTZ, WILLIAM D.

- A study of decision making and performance in rejected takeoffs  
[SAE PAPER 921134] p 287 A93-41322

### SHOPE, W. B.

- Army cockpit dealthalization program  
p 61 A93-15419

### SHOU, R. Z.

- The dynamic mathematical model and digital simulation of the environmental control system p 61 A93-14319

### SHOWERS, WILLIAM J.

- Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake p 38 A93-16544

### SHPATENKO, YU. A.

- Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333

### SHTEMBERG, A. S.

- Combined effect of head-down tilt and gamma rays on the higher nervous activity of rats p 242 A93-35262

### SHTERN, FAINA

- Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551

### SHU, Z. J.

- Spectral motion produces an auditory after-effect  
p 405 A93-55579

### SHUCH, H. P.

- The influence of flight experience on midair collision risk perception p 180 A93-28707

### SHUL'ZHENKO, E. B.

- Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401

- SHUPERT, C.**  
Vestibular ataxia following shuttle flights - Effects of microgravity on otolith-mediated sensorimotor control of posture p 169 A93-28750
- SHURTLEFF, DAVID**  
An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination [AD-A264293] p 331 A93-30818
- SHVAREVA, N. V.**  
Regulation of the carbohydrate metabolism in humans residing in the North p 384 A93-51117
- SIBEL'DINA, L. A.**  
Ozone - A new aspect of its effect on microorganisms p 398 A93-54971
- SICARD, BRUNO A.**  
Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots p 401 A93-55163
- SICONOLFI, S. F.**  
Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327
- SICONOLFI, STEVEN F.**  
Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females [NASA-TP-3298] p 128 A93-20318  
Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 A93-23734
- SIDOROVA, K. A.**  
The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649
- SIEDBAND, MELVIN P.**  
X Ray System, Lightweight Medical (XRSLM) [AD-A258159] p 123 A93-18295
- SIEGEL, BRIAN**  
Contact lenses in aviation - The Marine Corps experience p 289 A93-41172
- SIEM, FREDERICK M.**  
Predictive validity of an automated personality inventory for Air Force pilot selection p 179 A93-27452
- SIEVERS, ANDREAS**  
How well does the clinostat mimic the effect of microgravity on plant cells and organs? p 376 A93-49213
- SIGNORINI, C.**  
On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858
- SIGWORTH, S. K.**  
Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Biosatellite COSMOS 2044 p 156 A93-28743
- SILBIGER, MARTIN S.**  
A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267
- SILS, INGRID V.**  
Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 A93-12960
- SILVEIRA, S. R.**  
Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force p 369 A93-32255
- SILVERSTEIN, JOANN**  
Contaminant distribution and accumulation in water recycle systems p 307 A93-41519  
Inactivation of a model coliphage virus in water by iodine [SAE PAPER 921361] p 274 A93-41520  
Generation of iodine disinfection by-products (IDP's) in a water recycle system [SAE PAPER 921362] p 307 A93-41521  
A systems approach to water recycling research p 347 A93-42149
- SILVERSTEIN, LOUIS D.**  
Spatial judgments with monoscopic and stereoscopic presentation of perspective displays p 102 A93-19988  
Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990
- SIMANONOK, K.**  
Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 A93-12014
- SIMANONOK, KARL E.**  
Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206
- SIMON, ROBERT**  
Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions [AD-A258280] p 26 A93-11779  
Development of measures of crew coordination [AD-A255384] p 70 A93-14651
- Attention factors associated with head-up display and helmet-mounted display systems [AD-A260204] p 235 A93-24001
- SIMONDS, CHARLES H.**  
Assessment of the state of the art in life support environmental control for SEI p 315 A93-27978
- SIMONEIT, BERND R. T.**  
Future research p 74 A93-18010  
Aqueous high-temperature and high-pressure organic geochemistry of hydrothermal vent systems p 397 A93-53285
- SIMONSEN, L. C.**  
Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- SIMONSEN, LISA C.**  
Radiation exposure predictions for long-duration stay Mars missions [AIAA PAPER 92-4584] p 28 A93-13288  
Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817  
Radiation exposure predictions for short-duration stay Mars missions [AAS PAPER 92-107] p 277 A93-39261  
Human factors evaluation of the HL-20 full-scale model p 409 A93-53746  
Conceptual design of a lunar base thermal control system p 68 A93-14003
- SIMPSON, LANCE L.**  
A core facility for the study of neurotoxins of biological origin [AD-A254359] p 50 A93-12945
- SIMPSON, R.**  
Integration of exterior lighting systems and night vision imaging systems [AD-A254826] p 63 A93-12732
- SINACORI, JOHN B.**  
A demonstration of motion base design alternatives for the National Advanced Driving Simulator [NASA-TM-103881] p 236 A93-24490
- SINGH, INDRAMANI**  
Adaptive automation and human performance. 3: Effects of practice on the benefits and costs of automation shifts [AD-A254381] p 64 A93-12860
- SINGH, INDRAMANI L.**  
Performance consequences of automation-induced 'complacency' p 286 A93-39571
- SINGH, M. P.**  
Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide p 271 A93-39707
- SINGH, M. V.**  
Changes in body fluid compartments during hypohydration and rehydration in heat-acclimated tropical subjects p 251 A93-35496
- SINGH, MEGHA**  
Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072
- SINGHAL, R. K.**  
Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues [AIAA PAPER 93-1156] p 230 A93-31031
- SIPES, WALTER E.**  
Field test of a computer-driven tool to measure psychological characteristics of aircrew [AD-A264484] p 341 A93-30425
- SIRKO, ROBERT J.**  
Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models [SAE PAPER 921355] p 306 A93-41514  
Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design [SAE PAPER 921356] p 307 A93-41515
- SITLER, GLENN A.**  
Dew point analysis for Space Station Freedom [SAE PAPER 921227] p 296 A93-41401
- SIVAK, M.**  
Discomfort glare from high-intensity discharge headlamps: Effects of context and experience [PB93-174720] p 336 A93-30659
- SJOESTEDT, A.**  
Characterization and classification of strains of Francisella tularensis isolated in the central Asian focus of the Soviet Union and in Japan [FOA-B-40421-4.4] p 275 A93-28200  
Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia [FOA-B-40422-4.4] p 275 A93-28212
- SKAGEN, E. B.**  
The USO-concept applied to a biological model experiment p 210 A93-24379
- SKATRUD, JAMES B.**  
Determinants of poststimulus potentiation in humans during NREM sleep p 78 A93-20034
- SKLAIR, CHERYL**  
Accuracy of locating circular features using machine vision p 182 A93-27022
- SKWERES, JOYCE A.**  
Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility [SAE PAPER 921214] p 273 A93-41390
- SLADE, HOWARD**  
Evolving EVA system capability for the evolving Space Station Freedom requirements p 312 A93-27791
- SLATER, TIMOTHY**  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 A93-32264  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 A93-32265
- SLEDKOV, A. I.**  
Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure p 76 A93-18296
- SLEEPER, HOWARD L.**  
Space life support technology applications to terrestrial environmental problems p 265 A93-25617
- SLEGTEHORSST, R. P.**  
A new concept for helmet mounted vision p 145 A93-19767
- SLEPCHUK, N. A.**  
The values of the skin-temperature gradients and their significance for thermoregulation p 9 A93-12862
- SLESAREV, ALEKSEI I.**  
DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580
- SMETANIN, B. N.**  
Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653
- SMIRNOV, I. V.**  
Consequences of a basic model of external-information perception p 98 A93-18414
- SMIRNOV, K. L.**  
Effects of spaceflight on the proliferation of jejunal mucosal cells [NASA-CR-191303] p 51 A93-13449
- SMIRNOV, K. V.**  
Formation of the hypokinetic syndrome in the digestive system under conditions of weightlessness p 119 A93-25600
- SMIRNOV, M. B.**  
A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302
- SMIRNOV, R. V.**  
A comparative analysis of the bone marrow cell composition in rats following a long-duration continuous or interrupted exposure to a hypogeomagnetic field p 240 A93-35213  
Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenic layer of rat testes p 240 A93-35229
- SMIRNOV, V. S.**  
Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116
- SMITH, ALAN T.**  
Human low vision image warping - Channel matching considerations p 231 A93-32444
- SMITH, ARTHUR H.**  
Centrifuges - Their development and use in gravitational biology p 376 A93-49210
- SMITH, DAMON C.**  
Measurement of free and dissolved gas content of water samples on Space Station Freedom [SAE PAPER 921267] p 300 A93-41437
- SMITH, G. J.**  
Space habitat contaminant growth models. II p 345 A93-42094
- SMITH, GENA**  
Effects of fatigue and heat stress on vigilance of workers in protective clothing p 177 A93-27173
- SMITH, H.**  
Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates [DE93-007678] p 211 A93-24455
- SMITH, JAMES J.**  
Posture and the circulation - The age effect p 93 A93-20653
- SMITH, JEFF D.**  
Autonomous support for microorganism research in space [NASA-CR-192062] p 83 A93-17780
- SMITH, JEFFREY D.**  
LIAC - A closed ecosystem research facility p 347 A93-42129

## SMITH, LOUIS H., III

### SMITH, LOUIS H., III

Retroperitoneal fibrosis as a cause of hypertension in an aviator - A case report p 212 A93-30284

### SMITH, M. L.

Alteration in human mononuclear leucocytes following space flight p 165 A93-28705

### SMITH, RICHARD A.

Two techniques for measuring locomotion impact forces during zero G [NASA-TP-3305] p 217 N93-23410

### SMITH, ROBERT A.

Receptor and neural aliasing [AD-A261438] p 261 N93-26489

### SMITH, STEPHEN

Exocentric judgements in real environments and stereoscopic displays p 189 A93-27190

### SMITHERS, G. A.

Aquatic biofilms and their responses to disinfection and invading species [SAE PAPER 921211] p 296 A93-41387  
Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters [NASA-TM-108375] p 6 N93-12174

### SMORODIN, B. A.

A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302

### SNODGRASS, JOAN G.

Facilitation and interference in identification of pictures and words [AD-A261484] p 260 N93-26356

### SNOW, TERESA K.

Monitoring core temperature during exercise - Ingestible sensor vs. rectal thermistor p 394 A93-52309

### SNYDER, CHRISTINE A.

Air Traffic Control facility lighting p 188 A93-27167

### SNYDER, GORDON

Instrumentation for microbial monitoring of decontamination or biocide system effectiveness [SAE PAPER 921233] p 297 A93-41407

### SNYDER, HARRY L.

The effects of Benadryl and Hismanal on mood, physiological measures, antihistamine detection, and subjective symptoms p 385 A93-52302  
The effects of Benadryl and Hismanal on psychomotor performance and perceived performance p 385 A93-52303

### SNYDER, K. W.

A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment [DE93-007428] p 264 N93-25318

### SNYDER, QUAY C., JR.

Prospective assessment of stereoscopic visual status and USAF pilot training attrition p 116 A93-24039

### SO, RICHARD H. Y.

Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782

### SOBEL, ANNETTE L.

Design of the man-machine interface for an automatic target cue system p 348 A93-42843

### SOBH, TAREK M.

Operator/system communication - An optimizing decision tool p 101 A93-19104

### SOELTER, M.

Cardiovascular stress test with non-invasive techniques p 221 N93-24399

### SOINA, V. S.

Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558

### SOKOL, E. A.

Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411

### SOKOLOV, A.

Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362

### SOKOLOVA, I. B.

Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia p 76 A93-18295

### SOKOLOVA, M. M.

Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188

### SOKOLOVA, N. E.

Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage p 111 A93-23074

### SOLERSI, ROSA

Mechanical stimulation of skeletal muscle increases prostaglandin F2(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism [NASA-CR-193041] p 282 N93-27102

### SOLLERTSKAIA, T. N.

The role of dermorphin in the regulation of the winter hibernation processes in mammals p 38 A93-16748

### SOLOMKO, A. P.

Diurnal rhythmicity of human orthostatic stability p 250 A93-35253

### SOM, CHANG H.

Comparative test data assessment and simplified math modelling for Sabatier CO2 reduction subsystem [SAE PAPER 921228] p 296 A93-41402

### SOROKIN, I. V.

Diurnal rhythmicity of human orthostatic stability p 250 A93-35253

### SOULIER, V.

Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030

### SOUTHAM, T. H.

The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769

### SOUZA, KENNETH A.

An overview of gravitational physiology [NASA-TM-102849] p 35 N93-12319  
Studying the effects of microgravity on lower vertebrate development and behavior p 158 N93-21099

### SPACH, GERARD

Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560

### SPANOS, P. D.

Development of a large space robot - A multi-segment approach. I [AIAA PAPER 93-1463] p 261 A93-34012  
Development of a large space robot - A multi-segment approach. II [AIAA PAPER 93-1464] p 262 A93-34013

### SPARKES, BRIAN G.

Mechanisms of immune failure in burn injury p 15 N93-11285

### SPARLING, PHILLIP B.

Monitoring core temperature during exercise - Ingestible sensor vs. rectal thermistor p 394 A93-52309

### SPAULDING, GLENN

High density cell culture system [NASA-CASE-MS-22060-1] p 114 N93-19037

### SPECTOR, ELISABETH

Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039

### SPEETER, THOMAS H.

Transforming human hand motion for telemanipulation p 390 A93-49394

### SPENCER, G. A.

Early markers of HIV infection and subclinical disease progression p 17 N93-11296

### SPENCER, M. E.

Adaptive filters for monitoring localized brain activity from surface potential time series [DE93-003795] p 217 N93-22774

### SPEYER, J. J.

Human factors and the safety of flights: The importance of the management of sleep p 371 N93-32267

### SPIDALIERE, PETER D.

Characteristics and requirements of robotic manipulators for space operations p 182 A93-27003  
Safety issues of manipulator systems under computer control p 192 A93-29121

### SPIEGEL, JACK

Immunoconjugates: Magic bullets for cancer therapy? p 253 N93-25567

### SPIELVOGEL, H.

Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191

### SPINWEBER, CHERYL L.

Fight crew sleep during multiple layover polar flights p 380 A93-49226

### SPITTLE, ERIC K.

Hybrid 2 and hybrid 3 dummy neck properties for computer modeling [AD-A255544] p 66 N93-13874

### SPOONER, B. S.

Cytokine secretion by immune cells in space p 153 A93-28694

Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy p 155 A93-28725

Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands p 156 A93-28746

### SPROTT, RICHARD L.

Conference on Correlations of Aging and Space Effects on Biosystems, Oct. 30-Nov. 1, 1989, Proceedings p 79 A93-20651

### SQUIRES, W. G.

Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721

### SQUIRES, WILLIAM G.

Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221

### SQUYRES, STEVEN W.

Europa: Prospects for an ocean and exobiological implications p 113 N93-18552

### SRIDHAR, K. R.

Thermal control systems for low-temperature heat rejection on a lunar base [NASA-CR-191286] p 65 N93-13717

### SRINIVAS, SAMPATH

A decision-theoretic approach to the display of information for time-critical decisions: The Vista project p 367 N93-32152

### SRINIVASSEN, M.

Design requirements for force reflecting master controllers p 139 N93-18035

### STADEAGER, C.

Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096

### STADEAGER, CARSTEN

Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620

### STAGNARO, MICHAEL J.

Integration of advanced teleoperation technologies for control of space robots p 366 N93-32107

### STAHLBERG, GABRIELE

The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 N93-31237

### STALLING, DAVID L.

Chemical and toxicological assessment of environmental contaminants in the Lunar-Chemical Analysis Laboratory p 62 A93-17433

### STAN-LOTTER, HELGA

Purification and properties of an ATPase from Sulfolobus solfataricus p 201 A93-32115  
Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from Halobacterium saccharovorum p 201 A93-32116  
Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557

### STANEK, ELAINE M.

Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934

### STANLEY, H. E.

Long-range anticorrelations and non-Gaussian behavior of the heartbeat p 161 A93-28049

### STANNY, R. R.

The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB [AD-A254840] p 27 N93-12432

### STANTON, CRAIG

Pressure, composition, and temperature control of cabin atmosphere on Space Station Freedom [SAE PAPER 921216] p 296 A93-41392

### STANUSH, JULIE

Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 N93-12211

### STARCK, JUKKA

Postural stabilization on a moving platform oscillating at high frequencies p 252 A93-35497

### STARK, L. W.

Visual search in virtual environments p 233 A93-33450

### STARK, LAWRENCE

Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446  
Timing considerations of Helmet Mounted Display performance p 233 A93-33449

### STARSHINOVA, E. G.

The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649

### STATLER, IRVING C.

A voyage to Mars: A challenge to collaboration between man and machines p 70 N93-14614

### STAVERT, D. M.

Potential health hazards from thermal degradation events - Particulate vs. gas phase effects [SAE PAPER 921388] p 282 A93-41546

### STAVROPOULOS, A.

Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 N93-32256

### STAZHADZE, L. L.

Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228

### STEEL, DUNCAN

Cometary supply of terrestrial organics - Lessons from the K/T and the present epoch p 109 A93-17981

### STEELE, JOHN W.

Space Station Water Processor - Current flight design [SAE PAPER 921112] p 289 A93-41306

- The application of filtration technology within the Water Processor on board Space Station Freedom  
[SAE PAPER 921270] p 300 A93-41440
- Space Station Condensing Heat Exchanger biofilm formation and control evaluation  
[SAE PAPER 921383] p 308 A93-41541
- STEFFEN, JOSEPH M.**  
Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt p 37 A93-14974
- STEFFEN, R.**  
Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations p 15 N93-11288  
Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 N93-11307
- STEGEMANN, JUERGEN**  
Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress p 401 A93-55165  
Columbus payload requirements in human physiology p 220 N93-24386
- STEIMLE, H.**  
Mir 1992 operations and crew training p 226 N93-24352
- STEIN, F.**  
Cerebral autoregulation in microgravity p 173 N93-21112
- STEIN, FLO**  
Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533
- STEIN, T. P.**  
Effect of spaceflight on human protein metabolism p 360 A93-47097
- STEINLAGE, R. C.**  
Quantification of human responses p 340 N93-29564
- STEINMAN, ROBERT M.**  
Coordinated action in 3-D space [AD-A261418] p 261 N93-26449
- STENMARK, KURT R.**  
Functional and structural adaptation of the yak pulmonary circulation to residence at high altitude p 326 A93-44181
- STENZEL, R.**  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556
- STEPANIAN, E. B.**  
Changes in the brain blood flow and respiration during psychoemotional stress p 252 A93-36723
- STEPANOV, V. K.**  
Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333
- STEPHENS, ROBERT L.**  
Effects of 2 mg and 4 mg atropine sulfate on the performance of U.S. Army helicopter pilots p 7 A93-10326  
Visual illusions and other effects with night vision devices p 230 A93-30072  
Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator [AD-A258012] p 119 N93-17817  
Nutrition and hydration status of aircrew members consuming the food packet, survival, general purpose, improved during a simulated survival scenario [AD-A258744] p 128 N93-20384  
The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness [AD-A263033] p 283 N93-27923
- STEPHENSON, LOU A.**  
Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise [AD-A259068] p 124 N93-19072
- STERN, JOHN A.**  
Enhanced performance using physiological feedback [AD-A258006] p 130 N93-17816
- STERN, L. S.**  
Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703
- STERN, ROBERT M.**  
Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility p 116 A93-24037
- STERNBERG, SAUL**  
The dynamics of visual representation, attention, encoding, and retrieval processes [AD-A264674] p 342 N93-30543
- STETTER, KARL O.**  
Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821  
Life in hot springs and hydrothermal vents p 243 A93-36559
- DNA topoisomerase V is a relative of eukaryotic topoisomerase I from a hyperthermophilic prokaryote p 399 A93-55580
- STEVENS, L.**  
Functional adaptation of different rat skeletal muscles to weightlessness p 377 A93-49575
- STEVENSON, JOANN**  
Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935
- STEWART, D. F.**  
Program development for exercise countermeasures [SAE PAPER 921140] p 292 A93-41327
- STEWART, DONALD F.**  
Medical concerns for exploration-class missions p 386 A93-52409  
Biomedical Monitoring and Countermeasures Facility p 205 N93-22624
- STICKEL, MARK**  
Interpretation as abduction [AD-A259608] p 225 N93-24227
- STIEBER, MICHAEL**  
A space manipulator with inertially fixed base? [AIAA PAPER 93-3866] p 393 A93-51452
- STIFFLER, JAMES A.**  
I-NIGHTS and beyond p 227 A93-30054
- STILL, DAVID L.**  
Contact lenses in aviation - The Marine Corps experience p 289 A93-41172
- STINMAN, ROBERT M.**  
Coordinated action in 3-D space [AD-A249830] p 31 N93-10994
- STOCKER, U.**  
Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697
- STODIECK, L. S.**  
Design and evaluation of a payload to support plant growth onboard COMET 1 [SAE PAPER 921389] p 308 A93-41547
- STOIAN, MAURICA**  
Fractures of the vertebral column after ejection p 46 A93-15575
- STOILOVA, I.**  
Sleep as a restorative process under extreme conditions p 89 A93-18291
- STOKER, C. R.**  
The possibility of life on Mars during a water-rich past p 196 A93-27887
- STOKES, JAMES M.**  
Ocular attention-sensing interface system [NASA-CR-190884] p 65 N93-13450
- STOKLOSA, JANIS H.**  
NASA/NSF Antarctic Science Working Group p 81 N93-16802
- STOLKI, THOMAS J.**  
The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality [SAE PAPER 921266] p 300 A93-41436
- STOLLE, MICHAEL F.**  
Hyperbaric treatment operations aboard Space Station Freedom [SAE PAPER 921142] p 292 A93-41328
- STONE, B.**  
Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569
- STONE, LELAND S.**  
Human speed perception is contrast dependent p 55 A93-14119  
Human speed perception is contrast dependent p 174 A93-26950  
Effect of contrast on human speed perception [NASA-TM-103898] p 141 N93-19104
- STONE, LYDIA RAZRAN**  
Digest of Russian Space Life Sciences, issue 33 [NASA-CR-3922(39)] p 244 N93-25195
- STONE, WILLIAM H.**  
Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259
- STONEV, WILLIAM E.**  
Cooperative intelligent robotics in space II; Proceedings of the Meeting, Boston, MA, Nov. 12-14, 1991 [SPIE-1612] p 182 A93-27001
- STORM, WILLIAM F.**  
Subjective mood and fatigue of C-141 crew during Desert Storm p 370 N93-32264  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict p 371 N93-32265  
Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict p 371 N93-32268
- STORMSHAK, F.**  
Joint HVAC transmission EMF environmental study [DE92-017863] p 43 N93-15211
- STOTT, J. R. R.**  
Adaptation to nauseogenic motion stimuli and its application in the treatment of airsickness p 404 A93-55947
- STOUT, R. W.**  
Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287
- STOVAL, J. MICHAEL**  
Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071  
Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080  
Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081
- STOWE, RAYMOND P.**  
Kinetic tetrazolium microtiter assay [NASA-CASE-MSC-21979-1] p 82 N93-17049
- STOYCOS, LARA E.**  
Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system [NASA-TM-104769] p 321 N93-29044
- STRAMLER, J.**  
Occupational ergonomics in space p 68 N93-14013
- STRATFORD, R.**  
Design guide for the ergonomic aspects of helicopter crew seating [ISVR-TR-209] p 65 N93-13464
- STRAUME, TORE**  
Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation [DE92-018066] p 5 N93-10974
- STRAUSS, A. M.**  
Bone loss and human adaptation to lunar gravity p 51 N93-14002
- STRAUSS, ALVIN M.**  
Predicting skeletal adaptation in altered gravity environments p 213 A93-30772  
A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging [SAE PAPER 921253] p 298 A93-41423  
Power assist EVA glove development [SAE PAPER 921255] p 299 A93-41425  
EVA Glove Research Team [NASA-CR-193014] p 313 N93-27847  
A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848  
A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849  
Power assist EVA glove development p 314 N93-27850
- STRAYER, DAVID L.**  
Cognitive function at high altitude p 386 A93-52505
- STREET, D. R., JR.**  
The unique contribution of selected personality tests to the prediction of success in naval pilot training [AD-A258144] p 132 N93-18291
- STREET, DAVID R., JR.**  
The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training [AD-A258025] p 131 N93-17919  
The five-factor personality model and naval aviation candidates [AD-A260227] p 225 N93-24319
- STREET, J. J.**  
Lunar base CELSS: A bioregenerative approach p 67 N93-13993
- STRETZKE, E.**  
CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 N93-24401
- STREUBEL, SIEGFRIED**  
Instructions and advance training measures for the improvement of human reliability [IMBB-FE-313-S-PUB-0500] p 181 N93-21402
- STRICKLIN, MARCELLA D.**  
Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition [NASA-TP-3297] p 149 N93-20319  
Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 N93-23734
- STRIEPE, SCOTT A.**  
Radiation exposure predictions for long-duration-stay Mars missions [AIAA PAPER 92-4584] p 28 A93-13288

## STROFFOLINI, T.

- Radiation exposure predictions for short-duration stay Mars missions  
[AAS PAPER 92-107] p 277 A93-39261

## STROFFOLINI, T.

- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303

## STROMEYER, C. F., III

- Colour is what the eye sees best p 159 A93-26245  
The effects of luminance boundaries on color perception  
[AD-A250705] p 22 N93-11841

## STROMEYER, H.

- Mir 1992 operations and crew training p 226 N93-24352

## STROUP, T.

- Crop interactions in polyculture and their implications for CELSS design  
[SAE PAPER 921197] p 295 A93-41373

## STRUCK, JUERGEN

- Advanced cockpit-mission and image management p 144 N93-19760

## STUART, BRUCE O.

- Improved inhalation technology for setting safe exposure levels for workplace chemicals p 174 N93-22164

## STUART, C. A.

- Alteration in human mononuclear leucocytes following space flight p 165 A93-28705

## STUART, MARK A.

- Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155

- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system  
[NASA-CR-185689] p 34 N93-12211

## STUCKY, RICHARD K.

- The earliest fossil evidence for sexual dimorphism in primates p 152 A93-27775  
First skulls of the early Eocene primate *Shoshonius cooperi* and the anthropoid-tarsier dichotomy p 202 A93-32670

- Revision of the Wind River faunas, early Eocene of central Wyoming. X - Bunophorus (Mammalia, Artiodactyla) p 203 A93-33026

- Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystriocomorphous rodent (Mammalia: Rodentia) p 328 A93-44903

## STUMP, CRAIG S.

- Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity p 78 A93-20036  
Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178  
Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179

## STUPAKOV, G. P.

- Occupational health problems in aviation medicine p 252 A93-36743

- The limits of human impact acceleration tolerance  
[AIAA PAPER 93-3572] p 400 A93-52692

## STURGES, MICHAEL S.

- Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499

## TURNER, W. Q.

- Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030

## STURT, R. M. V.

- Computer aided methods for simulating occupant response to impact using OASYS DYNA3D p 142 N93-19666

## STUSTER, JACK

- Long-duration isolation and confinement: Human factors issues and research requirements p 100 N93-16808

## STYCZYNSKI, T. E.

- Gray water recycling with a unique vapor compression distillation (VCD) design  
[SAE PAPER 921318] p 304 A93-41480

## STYF, J.

- Intramuscular pressure and electromyography as indexes of force during isokinetic exercise p 380 A93-49291

## SUGIE, ISAMU

- Hematological changes in space microgravity environments p 46 A93-15528

## SUGIYAMA, SHIGERU

- On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791

## SUKACHOVA, O. O.

- The state of the endocrine system of rats of different age under conditions of immobilization stress and biomes administration p 242 A93-35671

## SUKHANOV, IU. V.

- Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207

## SULLIVAN, CHRISTOPHER

- Insights into pilot situation awareness using verbal protocol analysis p 175 A93-27138

## SULLIVAN, COLIN E.

- Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs p 79 A93-20037

## SULTANOV, F. F.

- Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis p 39 A93-16750

## SULZMAN, F. M.

- Thermoregulatory responses of rhesus monkeys during spaceflight p 154 A93-28706  
Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions p 383 A93-49568

## SULZMAN, FRANK M.

- NASA plans and opportunities p 79 A93-20652

## SULZNER, MICHAEL

- Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from *Halobacterium saccharovorum* p 201 A93-32116  
Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557

## SUMMERFIELD, B. R.

- Kennedy Space Center environmental health program p 166 A93-28713

- Environmental monitoring and research at the John F. Kennedy Space Center p 154 A93-28714

## SUN, BINGYONG

- Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177

## SUN, HONGYUAN

- Application of system identification to research on cardiovascular regulative function p 3 A93-13544

## SUN, SHINFU

- Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m p 280 A93-41120  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121

## SUN, SIDNEY C.

- The Centrifuge Facility Life Sciences Glovebox configuration study  
[SAE PAPER 921158] p 293 A93-41341

## SUN, YA-ZHI

- The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690

## SURUDA, A. J.

- Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers p 168 A93-28739

## SURVANSI, S. S.

- Statistically based decompression tables 8: Linear-exponential kinetics p 120 N93-17926  
Statistically based decompression tables. 7: Selection and treatment of primary air and N2O2 data  
[AD-A259090] p 172 N93-20587

## SUS, IRENE

- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 N93-31236

## SUSAK, LARK E.

- Study design for microgravity human physiology experiments p 118 A93-25208

## SUSLIN, V. P.

- Radiation conditions onboard passenger aircraft p 249 A93-35230

## SUTCLIFFE, J. G.

- Molecular approach to hypothalamic rhythms  
[AD-A264438] p 335 N93-30421

## SUTHERLAND, LYNN

- A monitoring and control system for complex man-machine systems: Preliminary design p 70 N93-14951

## SUTTON, JOHN R.

- Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121

## SUTTON, STEWART A.

- Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis p 33 N93-11941

## SUTTON, TERRY

- Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071

- Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080

## PERSONAL AUTHOR INDEX

- Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081

## SUVENTO, S.

- The prediction of the adaptation of circadian rhythms to rapid time zone changes p 278 A93-39714

## SUVOV, P. M.

- The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649

## SUZUKI, HAJIME

- Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge p 379 A93-49178

## SUZUKI, HIROYUKI

- Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398

## SVENSSON, INDRA

- Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment  
[FOA-A-40065-4.5] p 359 N93-32423

## SVETAILO, E. N.

- Data bank establishment principles as applied to the problem of physiological norms in space medicine p 249 A93-35234

## SVIDERSKAIA, G. E.

- Motor activity of animals under elevated pressure p 75 A93-18290

## SVIRIAEV, V. I.

- Vagotropic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749

## SWAB, RODNEY E.

- Habitat automation p 33 N93-11976

## SWAIN, JAMES H.

- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets  
[AD-A252427] p 13 N93-10709

## SWALES, MICHAEL R.

- Helicopter night vision goggle testing in the United Kingdom p 148 A93-19917

## SWAMINATHAN, HARIHARAN

- Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions  
[AD-A252820] p 26 N93-11779

## SWANSON, DAVID E.

- Retinal modeling: Segmenting motion from spatio-temporal inputs using neural networks  
[AD-A258854] p 125 N93-19369

## SWARSEN, RONALD J.

- Alcoholism and treatment in airline aviators - One company's results p 257 A93-35499

## SWARDSON, SOMPORE

- Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro p 205 A93-33045

## SWEENEY, MICHAEL A.

- Carbonaceous chondrites and the origin of life p 412 A93-55997

## SWIERENGA, SARAH J.

- Human performance data visualization for system design teams p 348 A93-42840

## SWINDALE, N. V.

- Spectral motion produces an auditory after-effect p 405 A93-55579

## SWINK, JAY R.

- High-speed civil transport - Advanced flight deck challenges  
[AIAA PAPER 92-4231] p 28 A93-13357

## SYLVIA, DAVID M.

- The production and use of aeroponically grown inocula of VAM fungi in the native plant nursery  
[PB92-204973] p 43 N93-15208

## SYMONS, J. D.

- Effects of sleep deprivation and exercise on glucose tolerance p 281 A93-41165

## SYMONS, J. M.

- Use of sorption technology for treatment of humidity condensate for potable water  
[SAE PAPER 921312] p 303 A93-41474

## SYROMIATNIKOV, V. S.

- Manipulator system for module redocking on the Mir Orbital Complex p 263 A93-35534

## SYRZYCKI, MAREK J.

- Modelling and simulation of human retinal vision processing p 335 N93-30269

## SYSOEV, V. N.

- Changes in the brain blood flow and respiration during psychoemotional stress p 252 A93-36723

## SYTNIK, S. I.

- Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173

- Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress p 253 A93-36745



**SZEMZO, ATTILA**

Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560

**SZLYK, PATRICIA C.**

Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 N93-12960

**SZOSTAK, JACK W.**

Selection of a ribozyme that functions as a superior template in a self-copying reaction p 111 A93-22053  
Isolation of new ribozymes from a large pool of random sequences p 400 A93-56548

**T****TADDEO, B.**

HIV variability and perspectives of a vaccine p 16 N93-11294

**TADROS, ALFRED H.**

Space telerobotic research and applications at Space Systems/Loral [AAS PAPER 91-046] p 62 A93-15588

**TAERNVIK, A.**

Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia [FOA-B-40422-4.4] p 275 N93-28212

**TAFFORIN, C.**

Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space p 130 A93-25207

**TAGLIABUE, ALDO**

Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171 p 20 N93-11309

**TAILLANDIER, D.**

Protein requirements in hypoxia or hypokinesia p 368 N93-32244

**TAIRBEKOV, M. G.**

Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248

**TAIT, STEVEN**

Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970

**TAJIMA, F.**

Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281

**TAJIMA, NAOKO**

Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306

**TAKADA, MASAHARU**

Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032

**TAKAHASHI, KEIICHI**

Short-term microgravity to isolate graviperception in cells p 111 A93-21901

**TAKAHASHI, SHUJI**

Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032

**TAKAHASHI, TOSHIHARU**

Flight crew sleep during multiple layover polar flights p 380 A93-49226

**TAKAMI, MASAKAZU**

Lunar surface experiment system p 316 N93-28034

**TAKANO, YUKATA**

Study on environment control and life support technology p 149 N93-20413

**TAKANO, YUTAKA**

Conceptual study on manned lunar surface site p 316 N93-28029

**TAKASE, S.**

Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720

**TAKEDA, N.**

Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711  
Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712

**TAKEOKA, M.**

Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560

**TAKEUCHI, TORU**

Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899

**TAKEUCHI, YOSHINORI**

Controllability of the voice command system - A preliminary study p 27 A93-11287

**TAMPONNET, C.**

European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed [SAE PAPER 921200] p 295 A93-41376  
Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302

**TAMURA, HIROHISA**

Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321

**TAMURA, YOSHIHIRO**

Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029

**TAN, G.**

Recent regenerative ECLSS technology developments in Europe [SAE PAPER 921332] p 304 A93-41493

**TAN, M. N.**

Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704  
Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705

**TANABE, MINORU**

Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 A93-49180

**TANAKA, KEIJI**

Design of a display system for a human pilot's supervisory tasks p 27 A93-11201

**TANAKA, KIYOSHI**

Conceptual study of manned lunar surface site p 316 N93-28031

**TANAKA, MASAKI**

Optimal manipulator trajectories for space robots [AAS PAPER 91-669] p 410 A93-55838

**TANAKA, WAYNE**

Adaptive autonomous target cue p 148 N93-19784

**TANG, TOAN**

Design of a radiator shade for testing in a simulated lunar environment [NASA-CR-192080] p 108 N93-17710

**TANGO, TOSHIRO**

Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306

**TANKERSLEY, CLARKE**

Cardiovascular responses to lower body negative pressure in trained and untrained older men p 115 A93-21686

**TANZI, E.**

Vaccination against Hepatitis B: The Italian strategy p 15 N93-11289

**TARANOVA, N. P.**

Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage p 111 A93-23074

**TARASENKO, G. I.**

Subjective reactions and objective assessment of the auditory and ventilatory functions of the middle ear during changes in atmospheric pressure p 45 A93-15174

**TARASOV, I. K.**

Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401

**TARR, MICHAEL J.**

Representations of shape in object recognition and long-term visual memory [AD-A264342] p 341 N93-30163

**TARRIERE, C.**

Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 N93-19708

**TARRIERE, CLAUDE**

The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 N93-19705

**TARUI, HIDEO**

The effect of G-experience on heart rate during +Gz loading p 333 A93-45322

**TASEVOLI, MICHAEL**

Safety issues of manipulator systems under computer control p 192 A93-29121

**TASK, H. LEE**

Armstrong Laboratory space visual function tester program p 284 N93-28739  
Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1) p 284 N93-28740

Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2) p 284 N93-28741

Effect of microgravity on the visual near point: Visual Function Tester-Model 4 (VFT-4) p 284 N93-28742

**TASSIOS, DIMITRIOS P.**

Applied chemical engineering thermodynamics [ISBN 0-387-54759-2] p 357 A93-46075

**TATARA, JAMES D.**

The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test [SAE PAPER 921269] p 300 A93-41439

**TATAUROV, A. IU.**

Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214

**TATE, ISAO**

Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032

**TATRO, D. L.**

Carotid-cardiac baroreflex response and LBNP tolerance following resistance training p 164 A93-28696

**TATSUOKA, KIKUMI K.**

A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity [AD-A255926] p 52 N93-14109

**TATSUOKA, MAURICE M.**

A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity [AD-A255926] p 52 N93-14109

**TAYLOR, G.**

Intraocular pressure and retinal vascular changes during transient exposure to microgravity p 278 A93-39710

**TAYLOR, G. R.**

In vivo testing confirms a blunting of the human cell-mediated immune mechanism during space flight p 167 A93-28732

The clinical chemistry and immunology of long-duration space missions p 169 A93-28754

**TAYLOR, GERALD R.**

The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595

**TAYLOR, HENRY L.**

The effect of wearing protective chemical warfare combat clothing on human performance p 230 A93-30287

The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 N93-12491

**TAYLOR, JOY**

The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299

**TAYLOR, KEVIN M.**

Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) [AD-A253393] p 30 N93-10217

**TAYLOR, M. M.**

Principles for integrating voice I/O in a complex interface p 146 N93-19774

**TAYLOR, R. M.**

Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation p 175 A93-27139

Operator and automation capability analysis: Picking the right team p 319 N93-28864

**TAYLOR, RICHARD L. S.**

The effects of prolonged weightlessness and reduced gravity environments on human survival p 214 A93-30773

**TAYLOR, ROBERT**

The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork [AD-A256192] p 69 N93-14520

**TEACHOUT, MARK S.**

Determinants of performance rating accuracy: A field study [AD-A264726] p 342 N93-30575

**TEBEN'KOV, A. M.**

Autoset formation in the peripheral blood of people with lengthy limitations of motor activity p 250 A93-35245

**TEENAN, R. P.**

Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775

**TEETER, RONALD**

Digest of Russian Space Life Sciences, issue 33 [NASA-CR-3922(39)] p 244 N93-25195

**TEETER, RONALD C.**

NASA's manned space flight program [AAS PAPER 91-626] p 402 A93-55805

**TEIWES, W.**

Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 386 A93-52405

- TEJADA, F. RIOS**  
Survey of smoking habits in the Spanish Air Force  
p 370 A93-32262
- TEJEDA, M. R. DURAN**  
An epidemiological study in SAF's pilots ejections  
p 143 N93-19699
- TEJEDA, MA DEL ROSARIO DURAN**  
Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots  
p 369 N93-32258
- TEKEUCHI, YOSHINORI**  
Respiration curves as an index of pilot workload  
p 332 A93-45320
- TEMME, L. A.**  
Toward the ideal military aviation sunglass  
[AD-A258200] p 140 N93-18200
- TEMME, LEONARD A.**  
The detection of lateral motion by US Navy jet pilots  
[AD-A258115] p 120 N93-17896
- TEMOSHOK, LYDIA**  
Measuring performance decrements in aviation personnel infected with the human immunodeficiency virus  
p 130 A93-25209
- TEMPLETON, WILLIAM**  
Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission  
p 43 A93-13774
- TEN HARKEL, A. D.**  
Increased orthostatic blood pressure variability after prolonged head-down tilt  
p 161 A93-28676  
Influence of posture and prolonged head-down tilt on cardiovascular reflexes  
p 161 A93-28677  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest  
p 162 A93-28681  
Cardiopulmonary function during 10 days of head-down tilt bedrest  
p 162 A93-28683
- TENG, YU-YING**  
Windblast tolerance of human thorax and abdomen  
p 91 A93-19992
- TENNAKONE, K.**  
Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise  
p 269 A93-36564
- TERADA, NOBUYUKI**  
Effects of head down tilt on hepatic circulation and metabolism in conscious dogs  
p 80 A93-20899
- TERESHKIN, A. A.**  
A method for predicting the work load of a flight engineer engaged in counteracting failures of functional systems of a transport aircraft  
p 364 A93-45688
- TERNOVOJ, V. A.**  
Changes in the phospholipid and cholesterol content of rat tissues during adaptation to high altitude at different environmental temperatures  
p 358 A93-47100
- TEZOV, A. A.**  
Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity  
p 240 A93-35224
- THAGARD, NORMAN E.**  
Electronystagmography and audio potentials in space flight  
p 9 A93-11675
- THALMANN, E. D.**  
Statistically based decompression tables 8: Linear-exponential kinetics  
[AD-A257613] p 120 N93-17926  
Statistically based decompression tables. 7: Selection and treatment of primary air and N2O2 data  
[AD-A259090] p 172 N93-20587
- THARP, G.**  
Visual search in virtual environments  
p 233 A93-33450
- THARP, GREGORY**  
Depth cue interaction in telepresence and simulated telemanipulation  
p 232 A93-33446  
Timing considerations of Helmet Mounted Display performance  
p 233 A93-33449
- THARP, GREGORY K.**  
Exocentric judgements in real environments and stereoscopic displays  
p 189 A93-27190
- THEEUWES, J.**  
A spurious pop-out in visual search  
[AD-A256548] p 57 N93-14267
- THEIN, BRENDA**  
CREWCUT - A tool for modeling the effects of high workload on human performance  
p 178 A93-27180
- THEIS, RONALD L. A.**  
Consumables and wastes estimations for the First Lunar Outpost  
[SAE PAPER 921287] p 302 A93-41453  
Regenerative life support technology challenges for the Space Exploration Initiative  
p 346 A93-42128
- THILLY, W. G.**  
Comparative mutagenesis of human cells in vivo and in vitro  
[DE93-012269] p 276 N93-28651
- THOMAS, D. P.**  
Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training  
p 37 A93-14970
- THOMAS, G. B.**  
An automated version of the dichotic listening test: Hardware, software, and procedural details  
[AD-A258114] p 120 N93-17895
- THOMAS, JOHN R.**  
An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination  
[AD-A264293] p 331 N93-30818
- THOMAS, MARK**  
Controlled Ecological Life Support System (CELSS) modeling  
p 137 A93-25308  
OCAM - A CELSS modeling tool: Description and results  
[SAE PAPER 921241] p 298 A93-41413
- THOMAS, PAUL J.**  
Comets and the origins and evolution of life; Proceedings of the Conference, Univ. of Wisconsin, Eau Claire, Sept. 30-Oct. 2, 1991  
p 109 A93-17976
- THOMAS, W. G.**  
Electronystagmography and audio potentials in space flight  
p 9 A93-11675
- THOMASSEN, DAVID G.**  
Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro  
[DE92-013510] p 13 N93-10626
- THOME, RICHARD J.**  
The effect of type of task, degree of integration, and modality on the performance of concurrent tasks  
p 175 A93-27140
- THOMPSON, A. B.**  
An integrated human/plant metabolic mass balance model  
p 347 A93-42130
- THOMPSON, J.**  
Joint HVAC transmission EMF environmental study  
[DE92-017863] p 43 N93-15211
- THOMPSON, JOHN**  
Catalytic oxidation for treatment of ECLSS and PMMS waste streams  
[SAE PAPER 921274] p 301 A93-41443
- THOMPSON, PETER**  
Human speed perception is contrast dependent  
p 55 A93-14119  
Human speed perception is contrast dependent  
p 174 A93-26950  
Effect of contrast on human speed perception  
[NASA-TM-103898] p 141 N93-19104
- THONNARD, JEAN-LOUIS**  
Development of the Hermes EVA Space Suit Glove  
[SAE PAPER 921256] p 299 A93-41426
- THORNTON, R.**  
The physiological consequences of simulated helicopter flight in NBC protective equipment  
p 117 A93-24049
- THORNTON, R. C.**  
An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission  
[AD-A254984] p 35 N93-12509
- THORNTON, ROBERT**  
The relationship between environmental conditions and UH-60 cockpit temperature  
[AD-A255918] p 69 N93-14090  
Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment  
[AD-A259909] p 235 N93-23995  
The effects of cockpit heat on aviator sleep parameters  
p 371 N93-32266
- THORNTON, ROBERT J.**  
Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment  
[AD-A258502] p 129 N93-20400
- THORNTON, WILLIAM E.**  
Electronystagmography and audio potentials in space flight  
p 9 A93-11675
- TIAN, T. C.**  
The dynamic mathematical model and digital simulation of the environmental control system  
p 61 A93-14319
- TIBBITTS, T. W.**  
A matrix-based porous tube water and nutrient delivery system  
[SAE PAPER 921390] p 309 A93-41548  
Scenarios for optimizing potato productivity in a lunar CELSS  
p 67 N93-13997  
Potential of derived lunar volatiles for life support  
p 67 N93-13998
- TIERNEY, JOSEPH**  
Programmable interactive system for cochlear implant electrode stimulation  
[AD-A262558] p 333 N93-29421
- TIKHONCHUK, V. S.**  
Microwaves and the visual analyzer  
p 250 A93-35247
- Features of an ethanol effect in operators with different states of skin tissue basophils  
p 250 A93-35252
- TILLEY, SCOTT W.**  
Space telerobotic research and applications at Space Systems/Loral  
[AAS PAPER 91-046] p 62 A93-15588
- TILLOTSON, BRIAN**  
TRIALSS - Tool for Rapid and Intelligent Advanced Life Support System Selection and Sizing  
[SAE PAPER 921123] p 291 A93-41315
- TIMOFEeva, I. V.**  
Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions  
p 243 A93-35672
- TIMOSHENKO, T. E.**  
On a possible role of carbon dioxide in the genesis of the hyperbaric neural syndrome  
p 200 A93-31190
- TINGLE, TRACY N.**  
The fate or organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite  
p 110 A93-17984  
Formation of reduced carbonaceous matter in basalts and xenoliths - Reaction of C-O-H gases on olivine crack surfaces  
p 411 A93-53286
- TINKLENBERG, J.**  
Influence of aging and practice on piloting tasks  
p 286 A93-39708
- TINKLENBERG, JARED**  
The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator  
p 384 A93-52299
- TIPTON, CHARLES M.**  
Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity  
p 78 A93-20036  
Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats  
p 323 A93-42192  
Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing  
p 326 A93-44178
- TIPTON, D. A.**  
Health services at the Kennedy Space Center  
p 154 A93-28711  
Emergency medical operations at Kennedy Space Center in support of space shuttle  
p 166 A93-28712  
Kennedy Space Center environmental health program  
p 166 A93-28713
- TIRHANEN, L. S.**  
Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms  
p 101 A93-18418
- TISCHLER, MARC E.**  
Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats  
p 326 A93-44179
- TITOVA, G. T.**  
Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms  
p 101 A93-18418
- TIULKOVA, E. I.**  
Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure  
p 76 A93-18296
- TLEIMAT, B. W.**  
Gray water recycling with a unique vapor compression distillation (VCD) design  
[SAE PAPER 921318] p 304 A93-41480
- TLEIMAT, M. C.**  
Gray water recycling with a unique vapor compression distillation (VCD) design  
[SAE PAPER 921318] p 304 A93-41480
- TOBACK, A. C.**  
Skin care in the space environment  
p 170 A93-28756
- TOBEY, WAYNE K.**  
Air Traffic Control facility lighting  
p 188 A93-27167
- TOBOLIN, S. N.**  
A modified method for investigating gastric secretion in aviation medical examination  
p 359 A93-45692
- TODA, YOSHITSUGU**  
Research of a free-flying telerobot. IV - Development of dual-arm manipulation system  
p 411 A93-56254  
Skill compensation and dynamic coupling of macro/smart effector system  
p 411 A93-56260
- TODA, YOSHITUGU**  
Research of a free-flying telerobot. V - Handling a target with multi-arms  
p 411 A93-56255
- TODD, JAMES T.**  
Visual perception of structure from motion  
[AD-A253235] p 26 N93-11503
- TODD, P. W.**  
Effects of spaceflight on the musculoskeletal system - NIH and NASA future directions  
p 383 A93-49568

- TODD, PAUL**  
Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report p 375 A93-49206
- TOFF, W. D.**  
Cardiac pacing and aviation p 215 A93-32778
- TOME, TANIA**  
Chiral-symmetry-breaking in nonequilibrium chemical systems - The racemization influence p 269 A93-36563
- TOMKO, DAVID L.**  
Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural p 203 A93-32773
- TOMS, MONA L.**  
Effects of display luminance on the recognition of color symbols on similar color backgrounds p 189 A93-27191
- TONG, BO-LUN**  
Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation p 213 A93-30435
- TOON, S.**  
Primary charge separation in isolated photosystem 2 reaction centers [DE92-041128] p 82 N93-17189
- TORII, HIROYUKI**  
Manned lunar surface site p 316 N93-28033
- TORRIGIANI, G.**  
Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300
- TOURETZKY, DAVID S.**  
Connectionist models and linguistic theory: Investigations of stress systems in language [AD-A265450] p 364 N93-32064
- TOWNSEND, L. W.**  
Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073  
Human exposure to galactic cosmic rays in space p 410 A93-54887
- TOWNSEND, LAWRENCE W.**  
Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817  
Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975  
Target fragmentation in radiobiology [NASA-TM-4408] p 124 N93-18381
- TOYOTA, DEBORAH A.**  
Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise [AD-A259068] p 124 N93-19072
- TRABANINO, RUDY**  
The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality [SAE PAPER 921266] p 300 A93-41436
- TRAMBOVETSKII, E. V.**  
Hemodynamics in monkeys during antiorthostatic hypokinesia at angles of -6 and -20 deg p 241 A93-35259
- TRAMONT, E. C.**  
Relating cognitive function to military aviator performance in early HIV infection p 17 N93-11298
- TRAMONT, EDMUND C.**  
AIDS/HIV in the US Military p 16 N93-11291
- TRAN, PHILIP**  
SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 N93-18153
- TRANSMONTANO, J.**  
Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679
- TRAPP, S.**  
Anatomy and physiology of plant conductive systems [PB93-156032] p 245 N93-25877
- TRAUBE, E. C.**  
Discomfort glare from high-intensity discharge headlamps: Effects of context and experience [PB93-174720] p 336 N93-30659
- TRAUSCH, STEPHANIE V.**  
Performance evaluation of candidate space suit elements for the next generation orbital EMU [SAE PAPER 921344] p 305 A93-41503
- TREDICI, G.**  
Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713
- TREDICI, THOMAS J.**  
Night vision manual for the flight surgeon [AD-A257059] p 104 N93-15710
- TREVINO, MAURICE**  
Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970
- TREVINO, ROBERT**  
EVA operational guidelines and considerations for use during the Space Station Freedom design review process p 345 A93-42119
- TRINH, TINH T.**  
Method for culturing mammalian cells in a horizontally rotated bioreactor [NASA-CASE-MS-C-21294-2] p 5 N93-10110
- TRIPP, LLOYD D., JR.**  
Cerebral blood flow during 1 Gz acceleration as measured by transcranial Doppler p 84 A93-17532
- TRISTAN, V. G.**  
K.E. Tsiolkovsky on individual time perception and some characteristics of intuitive perception of the properties of time at different levels of motor activity and health p 98 A93-18413
- TROCHERIE, S.**  
Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots p 401 A93-55163
- TROSHIKHIN, G. V.**  
Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation p 77 A93-18301
- TRUJILLO, ANNA C.**  
The effects of history and predictive information on the ability of the transport aircraft pilot to predict an alert p 365 A93-46810
- TRUZHENNIKOV, A. N.**  
Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773
- TRYGG, K.**  
Changes in food and energy intake in military aircrew p 368 A93-32246
- TSANG, G.**  
Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569
- TSANG, IAN K. Y.**  
Study design for microgravity human physiology experiments p 118 A93-25208
- TSANG, PAMELA S.**  
A reappraisal of aging and pilot performance p 56 A93-15663
- TSAO, D. TEH-WEI**  
Development of physical and mathematical models for the Porous Ceramic Tube Plant Nutrifaction System (PCTPNS) [NASA-TM-107551] p 4 N93-10085
- TSCHAN, K. H.**  
Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363
- TSIMBALISTOVA, E. A.**  
Investigation of hemodynamics and sympatheticoadrenal system activity in air traffic controllers during their work p 247 A93-35209
- TSO, KAM S.**  
An operator interface design for a telerobotic inspection system [AIAA PAPER 93-1160] p 231 A93-31034  
Remote surface inspection system p 410 A93-55469
- TSODYKS, M. V.**  
Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962  
Effective neurons and attractor neural networks in cortical environment [PREPRINT-829] p 82 N93-17214
- TSUCHIDA, M. S.**  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070
- TSYBENKO, V. A.**  
Changes in the central hemodynamics under antiorthostasis in humans with different blood circulation types and physical training levels p 359 A93-46967
- TUBOLTSEV, S. V.**  
Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419
- TUCK, S.**  
AFTERRISE: Deep body temperature following exercise [AD-A259887] p 218 N93-23984
- TUCKER, ALAN**  
Heart and lung alterations in neonatal rats exposed to CO or high altitude p 77 A93-20027
- TUCKER, B. J.**  
Direct measurement of capillary blood pressure in the human lip p 279 A93-40550
- TULBAEVA, F. P.**  
Parameters of external breathing in an excess-pressure atmosphere p 76 A93-18298
- TULP, MARTIN TH. M.**  
Idaverine, an M2- vs. M3-selective muscarinic antagonist, does not prevent motion sickness in cats p 327 A93-44878
- TUOMALA, B.**  
The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators p 369 N93-32259
- TURANO, KATHLEEN**  
Visual psychophysics of egomotion [AD-A248349] p 26 N93-11488
- TURBASOV, V. D.**  
Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208  
Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238
- TURCHANINOVA, V. F.**  
Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238
- TURNAGE, JANET J.**  
An individual differences approach to fitness-for-duty assessment p 178 A93-27178
- TURNER, M. G.**  
Scaling issues for biodiversity protection [DE92-016689] p 6 N93-12315
- TUSCHL, H.**  
Influence of microgravity on immune system and genetic information p 160 A93-26572  
Influence of microgravity on immune system and genetic information p 220 N93-24370
- TUTT, CHRIS**  
SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 N93-18153
- TYAGI, A. K.**  
Changes in body fluid compartments during hypohydration and rehydration in heat-acclimated tropical subjects p 251 A93-35496
- TYBURCZY, JAMES A.**  
The fate of organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite p 110 A93-17984
- TYPKE, DIETER**  
Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821

## U

- UBERTINI, T. R.**  
Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 N93-11306
- UEADA, S.**  
Research and development of sensing and manipulation techniques for space robotics on a testbed [AIAA PAPER 93-0794] p 136 A93-24873
- UEDA, G.**  
Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560
- UEDA, GOU**  
Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats p 75 A93-18039
- UENO, SEIYA**  
Optimal manipulator trajectories for space robots [AAS PAPER 91-669] p 410 A93-55838
- UENOHARA, MICHIOHRO**  
Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254
- UIJDEHAAGE, SEBASTIAN H. J.**  
Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility p 116 A93-24037
- UKETA, YOSHIE**  
Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 A93-49180
- ULIANO, KEVIN C.**  
Training high performance skills using above real-time training [NASA-CR-192616] p 225 N93-24192
- UNGAR, EUGENE K.**  
Design of a Shuttle air and water prefilter for reduced gravity operation [SAE PAPER 921161] p 294 A93-41343
- UNGS, TIMOTHY J.**  
Safety concerns as a factor in pilot desire to change aircraft p 129 A93-24040
- UPADHYE, R. S.**  
Incineration for resource recovery in a closed ecological life support system p 409 A93-54826

## URBANI, L.

The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting

p 21 N93-11312

Cardiovascular risk factors in an Italian Air Force population: Preliminary report

p 362 N93-32252

## URBANI, LUCA

Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school

p 368 N93-32248

## URLINGS, P. J. M.

Overview of cockpit technology research and development programs for improvement of the man/machine interface: Review of the AGARD AVP Symposium held in Madrid, May 1992

p 320 N93-28872

## URSIN, HOLGER

The psychological effects of isolation on a space station - A simulation study

[SAE PAPER 921191] p 287 A93-41369

## USENKO, G. A.

Psychosomatic status and flying skill during geomagnetic disturbances

p 257 A93-35251

## USHAKOV, I. B.

Pharmacological defense of the brain during radiation damage - Some arguments

p 240 A93-35217

Microwaves and the visual analyzer

p 250 A93-35247

Features of an ethanol effect in operators with different states of skin tissue basophils

p 250 A93-35252

Early andrological effects in rats under the combined effect of irradiation and vibration

p 242 A93-35263

## USOV, V. M.

Computerized teaching of pilots to spatial orientation flight tasks

p 404 A93-52694

## UTELL, MARK J.

NASA Specialized Center for Research and Training (NSCORT) in space environmental health

[SAE PAPER 921358] p 307 A93-41517

## UTSUKI, NARISUKE

A computer simulation model for attention distribution and event generation

p 340 A93-45323

## UTSUKI, NARUSUKE

Controllability of the voice command system - A preliminary study

p 27 A93-11287

## V

## VACANTI, C. A.

Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids

p 160 A93-27048

## VADLAMUDI, BABU

Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*)

p 329 A93-44941

## VAERNES, RAGNAR J.

The psychological effects of isolation on a space station - A simulation study

[SAE PAPER 921191] p 287 A93-41369

## VAILAS, A.

Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training

[AD-A261059] p 267 N93-26229

## VAILAS, ARTHUR C.

Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training

p 37 A93-14970

## VALETON, J. M.

High-resolution contrast control on a video display: Method and calibration

[AD-A256552] p 60 N93-15400

## VALLERAND, A. L.

Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates

[AD-A262762] p 285 N93-28939

## VAN BELZEN, N.

Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells

p 272 A93-39715

## VAN CHARLDORP, KARIN J.

Idaverine, an M2- vs. M3-selective muscarinic antagonist, does not prevent motion sickness in cats

p 327 A93-44878

## VAN DE LINDE, F. J. G.

Comparison of four noninvasive rewarming methods for mild hypothermia

p 88 A93-18037

## VAN DER HOEK, J.

Suction-cup shoes for astronauts - A new method of foot restraint

p 62 A93-17072

## VAN DER STEEN, HAN F. A. M.

False cue detection thresholds in flight simulation

[AIAA PAPER 93-3578] p 407 A93-52674

## VAN DER VAART, J. C.

What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment

[AIAA PAPER 93-3561] p 406 A93-52661

## VAN HOOGSTRAATEN, W.

Suction-cup shoes for astronauts - A new method of foot restraint

p 62 A93-17072

## VAN LIEW, HUGH D.

Failure of the straight-line DCS boundary when extrapolated to the hypobaric realm

p 47 A93-16154

## VAN LOON, G.

Drug effects on orthostatic intolerance induced by bedrest

p 86 A93-17544

## VAN OOSTRUM, J.

Studies towards the crystallization of the rod visual pigment rhodopsin

p 1 A93-11150

## VAN VACTOR, DAVID

Emergence of telerobotic control enhancement from research in machine autonomy

p 183 A93-27028

## VANCUTSEM, C.

Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF)

p 21 N93-11316

## VANDENBOSCH, P.

Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF)

p 21 N93-11316

Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces

p 370 N93-32260

## VANDENBURGH, H. H.

Mechanically induced alterations in cultured skeletal muscle growth

p 202 A93-32749

## VANDENBURGH, HERMAN H.

Mechanical forces and their second messengers in stimulating cell growth in vitro

p 204 A93-33043

Mechanical stimulation of skeletal muscle mitigates glucocorticoid induced decreases in prostaglandin synthesis

[NASA-CR-193040] p 222 N93-24763

Mechanical stimulation of skeletal muscle increases prostaglandin F2(alpha) synthesis and cyclooxygenase activity by a pertussis toxin sensitive mechanism

[NASA-CR-193041] p 282 N93-27102

Growth factor involvement in tension-induced skeletal muscle growth

[NASA-CR-193023] p 282 N93-27113

## VANDERBEEK, RICHARD G.

Silicon neuron

[AD-A255091] p 50 N93-12756

## VANDERBURGH, HERMAN H.

Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro

p 205 A93-33045

## VANERP-BAART, A. M. J.

An automated processing system for food frequency and nutrition knowledge questionnaire

p 367 N93-32241

## VANHARANTA, HEIKKI

Determinants of +Gz-related neck pain - A preliminary survey

p 380 A93-49227

Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high +Gz forces

p 384 A93-52298

## VANHELDER, T.

Effects of sleep deprivation and exercise on glucose tolerance

p 281 A93-41165

## VANHULSTEYN, D.

Functional MRI studies of human vision on a clinical imager

[DE92-017448] p 49 N93-12566

## VANINGEN-DUNN, CAROLINE

Improving manikin biofidelity

p 142 N93-19668

## VANNI, R.

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate

p 19 N93-11306

## VANNIASINKAM, JOSEPH

Conceptual design of a thermal control system for an inflatable lunar habitat module

[NASA-CR-192014] p 140 N93-18113

## VANO, JOSE IGNACIO PERALBA

Trial of emergency ration of the Spanish Air Force

p 368 N93-32247

## VARDAMAN, JENNIFER J.

Response to automated function failure cue - An operational measure of complacency

p 176 A93-27147

## VARNAVAS, KOSTA

Platform stair lift

[NASA-CASE-MFS-28772-1] p 353 N93-29845

## VARNER, DENISE C.

Visual scene effects on the somatogravic illusion

p 88 A93-18035

## VARTANYAN, L. S.

Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue

p 378 A93-51101

## VAS'KOVSKII, B. V.

Vagotropic effects of peptides isolated from the brain of hibernating suxiiks

p 38 A93-16749

## VASIL'EV, A. YU.

New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination

p 279 A93-40774

## VASIL'EV, P. V.

Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity

p 45 A93-15173

Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress

p 253 A93-36745

## VASQUEZ, M.

Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium

p 329 A93-44935

## VASSAUX, ODIRER

Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1)

p 273 A93-41167

## VASTESAEGER, J.-P.

Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces

p 370 N93-32260

## VATSEK, A.

Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight

p 272 A93-40773

## VAUDRY, H.

Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes

p 377 A93-49561

## VAUGHAN, DAVID S.

Introduction to training decisions modeling technologies: The training decisions system

[AD-A249862] p 27 N93-12252

## VAVAKIN, IU. N.

Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time

p 250 A93-35255

## VAZQUEZ, J. M. MORENO

An epidemiological study in SAF's pilots ejections

p 143 N93-19699

## VAZQUEZ, JUAN M. MORENO

Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots

p 369 N93-32258

## VAZQUEZ, SIXTO L.

Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments

p 184 A93-27032

## VEJVODA, M.

Pre-adaptation to shiftwork in space

p 386 A93-52403

## VEJVODA, MARTIN

Response of the circadian system to 6 deg head-down tilt bed rest

p 117 A93-24045

## VELA, E.

Effect of task complexity on mental performance during immersion hypothermia

p 211 A93-30279

## VELTHUIZEN, ROBERT P.

A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain

p 214 A93-31267

## VENEMA, STEVEN C.

Fusing humah and machine skills for remote robotic operations

p 137 A93-24994

## VENERI, RUGGERO

System integration and verification approach for the environmental control system of the Columbus Attached Pressurised Module

[SAE PAPER 921261] p 299 A93-41431

## VERANI, P.

HIV variability and perspectives of a vaccine

p 16 N93-11294

## VERCHER, JEAN-LOUIS

Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks

p 287 A93-41166

## VERGHESE, C. A.

Lower body negative pressure system for simulation of +Gz-induced physiological strain

p 119 A93-25210

## VERKLEIJ, A. J.

Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells

p 272 A93-39715

## VERKLEIJ, ARIE J.

Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells

p 376 A93-49214

**VERLANDER, JAMES**

The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN) p 258 N93-25595

**VERNET-MAURY, EVELYNE**

The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 N93-19705

**VERNIKOS, J.**

Altered baseline blood volume and the norepinephrine response to stress in humans p 43 A93-14123  
Drug effects on orthostatic intolerance induced by bedrest p 86 A93-17544

**VERNIKOS, JOAN**

Human support for Mars exploration - Issues and approaches p 27 A93-12077

**VERON, HARRY**

Head mounted displays for virtual reality [AD-A263498] p 322 N93-29340

**VERONA, ROBERT W.**

Comparison of CRT display measurement techniques p 229 A93-30067

**VEROSTKO, CHARLES E.**

An assessment of waste processing/resource recovery technologies for lunar/Mars life applications [SAE PAPER 921271] p 300 A93-41441  
Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process [SAE PAPER 921275] p 301 A93-41444  
A hybrid regenerative water recovery system for lunar/Mars life support applications [SAE PAPER 921276] p 301 A93-41445

**VERRIER, RICHARD L.**

Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500

**VERSCHUT, R.**

Occupant simulation as an aspect of flight safety research p 142 N93-19665

**VERSPAY, J. J. L. H.**

A comparative evaluation of three take-off performance monitor display types [AIAA PAPER 93-3608] p 406 A93-52669

**VEST, THOMAS W.**

Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 N93-14870

**VETOSH, A. N.**

The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys p 75 A93-18289

**VETRO, S.**

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate p 19 N93-11306

**VETROVA, E. G.**

Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254

**VIBERTI, C.**

Zero-gravity underwater simulations for the Columbus programme - Outcome of the first campaigns p 62 A93-17075

**VICO, L.**

Microgravity and bone adaptation at the tissue level p 170 A93-28761

**VIDEBAEK, R.**

Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096

**VIDULICH, MICHAEL A.**

Testing a subjective metric of situation awareness p 178 A93-27183

**VIEILLEFOND, H.**

Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots p 401 A93-55163

**VIKEN, SALLY A.**

Predictive nosepointing and flightpath displays for air-to-air combat p 229 A93-30071

**VIKTOROV, A. N.**

Microflora of cabins of manned space objects and the problem of biological damage to the structural materials used in them p 262 A93-35237

**VILLARREAL, LEOPOLDO J.**

Space Shuttle crew compartment debris-contamination [SAE PAPER 921345] p 305 A93-41504

**VINH, NGUYEN X.**

Flight mechanics of high-performance aircraft [ISBN 0-521-34123-X] p 365 A93-47019

**VISELLI, SUSAN M.**

Prolactin-induced mitogenesis of lymphocytes from ovariectomized rats p 329 A93-44934

**VISO, MICHEL**

Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167

**VISWEVARN, C.**

Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables [AD-A254681] p 27 N93-12225

**VITHARANA, L. P. M.**

Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise p 269 A93-36564

**VIZZACCARO, A.**

In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automated enzyme immunoassay method to dose specific IgE p 21 N93-11314

**VLADIMIROV, N. I.**

Evaluation of the efficiency of the pilot's control activity in a flight simulator p 100 A93-18347

**VLASOV, V. V.**

Age and length of service of flight personnel in the case of chronic diseases p 248 A93-35227  
Age-related changes in hemoglobin and erythrocyte levels p 250 A93-35250

**VOELKEL, N. F.**

Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186

**VOGEL, JAMES A.**

An annotated bibliography of research involving women, conducted at the US Army Research Institute of Environmental Medicine [AD-A265497] p 360 N93-31917

**VOGEL, KURT**

Swimming behavior of the unicellular flagellate, Euglena gracilis, in simulated and real microgravity p 151 A93-26549

**VOGT, GREGORY L.**

Suited for spacewalking: A teacher's guide with activities [NASA-EP-279] p 65 N93-13692

**VOJTENKO, A. M.**

The problem of the pilot's professional reliability p 410 A93-55334

**VOLF, N. V.**

Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214

**VOLK, TYLER**

Crop growth and associated life support for a lunar farm p 67 N93-13994

**VOLKER, SUSANNE**

Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821

**VOLLE, MICHEL**

Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks p 287 A93-41166

**VOLZ, RICHARD**

Incorporating robot vision in tele-autonomous systems p 184 A93-27031

**VON JOUANNE, ROGER G.**

Dew point analysis for Space Station Freedom [SAE PAPER 921227] p 296 A93-41401

**VORONA, A. A.**

Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694

**VORONKOV, I. I.**

Influence of microgravity on immune system and genetic information p 160 A93-26572

**VORONKOV, Y. I.**

Influence of microgravity on immune system and genetic information p 220 N93-24370

**VOROS, ROBERT S.**

Age 60 Project: Consolidated database experiments [HS-TR-8025-3C(R2)] p 314 N93-27851

**VOVENKO, E. P.**

Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia p 76 A93-18295

**VOVK, E. V.**

Correlation between the lymph dynamics and venous pressure during short-term antiothostatic effects p 325 A93-43070

**W****WADA, K.**

Organic models of interstellar grains p 35 A93-11847

**WADA, YOSHIROU**

Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398

**WADDLE, JENNY**

Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933

**WADE, C. E.**

Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men [NASA-TM-103949] p 6 N93-12014

**WADE, CHARLES**

Gravitational Biology Facility on Space Station: Meeting the needs of space biology p 206 N93-22625

**WAGNER, DANIEL R.**

The effects of an antijet lag diet p 370 N93-32263

**WAGNER, P. D.**

Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574

**WAGNER, PETER D.**

Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally p 111 A93-21684

Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188

**WAKAHARA, M.**

Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745

**WAKATSUKI, TOHRU**

Adaptation of skeletal muscles and physical work capacity in a weightless environment p 38 A93-15527

**WALIGORA, JAMES M.**

The influence of prior exercise at anaerobic threshold on decompression sickness p 8 A93-10333

Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153

**WALKER, B. D.**

Computer aided methods for simulating occupant response to impact using OASYS DYNA3D p 142 N93-19666

**WALKER, C. A.**

The neurochemical and neuropharmacological basis of motion sickness [NASA-CR-190957] p 50 N93-13061

**WALKER, IAN D.**

Grasp synthesis for planar and solid objects p 184 A93-27034

**WALKER, M.**

Aminohydroxybutane bisphosphonate and clenbuterol prevent bone changes and retard muscle atrophy respectively in tail-suspended rats p 271 A93-39703

**WALKER, M. W.**

Incorporating robot vision in tele-autonomous systems p 184 A93-27031

**WALKER, MICHAEL W.**

Space based robot manipulators - Dynamics of contact and trajectory planning for impact minimization p 135 A93-22827

**WALLACE-ROBINSON, JANICE**

Publications of the Space Physiology and Countermeasures Program, Neuroscience Discipline: 1980-1990 p 55 N93-15583

Publications of the Space Physiology and Countermeasures Program, Cardiopulmonary Discipline: 1980-1990 p 123 N93-18376

**WALLACE, W. A.**

Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663  
Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664

**WALLESCHAUER, JAMES J.**

Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements [SAE PAPER 921347] p 305 A93-41506

**WALTER, M. R.**

Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377

**WALTERS, CURTIS L.**

Human factors applications in control systems design for ground testing of turbine engines p 409 A93-54410

**WALTERS, LAURIE C.**

Structured interviews for pilot selection - No incremental validity p 286 A93-39572

**WALTERS, T. J.**

Intermittent cold exposure causes a muscle-specific shift in the fiber type composition in rats p 378 A93-52618

**WALTON, K. D.**

Identification of a critical period for motor development in neonatal rats p 157 A93-28764

## WANG, BAOZHEN

### WANG, BAOZHEN

Protective effects of *Rhodiola crenulata* on rats under antihypertensive position and professional athletes p 327 A93-44843

### WANG, FANGZI

Investigation of nonlinear dynamic responses to random vibration in dogs p 4 A93-13722  
Investigation on requirements for ejection acceleration measuring system p 332 A93-44847

### WANG, GONG-ZHI

Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster* p 1 A93-11691

### WANG, HENGJUN

The development of a visual color checkerboard stimulator p 30 A93-13723

### WANG, HUI

'Screening-Controlling' Psychological Selection System for Air Force pilot cadet p 222 A93-30440

### WANG, JIA Z.

Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate p 260 A93-26436  
[AD-A261593]

### WANG, JUNYUAN

Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177

### WANG, XIANZHANG

Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074

### WANG, YULAN

A study of biological effects and characteristics of dynamic responses of organism on landing impact p 10 A93-13533  
Study on mechanical characteristics of viscera in dogs p 3 A93-13540

### WANG, Z. R.

Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439

### WANG, ZHI

Investigation on requirements for ejection acceleration measuring system p 332 A93-44847

### WANGENSTEEN, O. D.

Time course of functional repair of the alveolar epithelium after hyperoxic injury p 78 A93-20032

### WANKE, CRAIG

Hazard alerting and situational awareness in advanced air transport cockpits p 61 A93-14377

### WARBERG, J.

Arterial pulse pressure and vasopressin release in humans during lower body negative pressure p 360 A93-47096

### WARBERG, JORGEN

Volume-homeostatic mechanisms in humans during a 12-h posture change p 387 A93-52620

### WARBURTON, RICHARD

Case report - Chronic sub-dural hematoma following high-speed ejection p 282 A93-41171

### WARD, G. F.

KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation p 30 A93-10713  
[AD-A253931]

### WARD, GEORGE A.

Ergonomic development of digital map displays p 320 A93-28866

### WARGO, J.

Cancer risk assessment with intermittent exposure p 171 A93-28766

### WARNCKE, MARIT

The psychological effects of isolation on a space station - A simulation study p 287 A93-41369  
[SAE PAPER 921191]

### WARNER, HAROLD D.

Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight p 341 A93-30542  
[AD-A264661]

### WARNER, HARRY D.

Flight director information and pilot performance in instrument approaches p 131 A93-17857  
[AD-A258186]

### WARNER, MARGARET

Instrument-approach-plate design considerations for displaying radio frequencies p 289 A93-39574

### WARNER, R. W.

Viral hepatitis in the US Air Force, 1980 - 1989 p 15 A93-11287

### WARNER, RONALD

Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 A93-11297

### WARNER, RONALD D.

Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 A93-11292

### WARNOW, T.

A robust model for finding optimal evolutionary trees [DE93-010682] p 330 A93-30483

### WARNOW, TANDY J.

Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 A93-20848

### WARREN, RIK

Multistage integration model for human egomotion perception [AIAA PAPER 93-3564] p 406 A93-52664

### WARWICK, GRAHAM

Looks can kill p 231 A93-31626

### WASHBURN, DAVID A.

Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System p 202 A93-32651  
Analyzing the path of responding in maze-solving and other tasks p 202 A93-32652  
Comparative assessment of psychomotor performance - Target prediction by humans and macaques (*Macaca mulatta*) p 204 A93-33035  
Behavioral asymmetries of psychomotor performance in rhesus monkeys (*Macaca mulatta*) - A dissociation between hand preference and skill p 339 A93-44923  
Human factors with nonhumans - Factors that affect computer-task performance p 404 A93-32721

### WASICKO, MICHAEL J.

Response of genioglossus EMG activity to passive tilt in men p 279 A93-41118

### WASIELEWSKI, M. R.

Primary charge separation in isolated photosystem 2 reaction centers [DE92-041128] p 82 A93-17189

### WASSERSUG, RICHARD J.

Studying the effects of microgravity on lower vertebrate development and behavior p 158 A93-21099

### WASSMUTH, CHAD

SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 A93-18153

### WATANABE, S.

Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762

### WATANABE, SATORU

Effects of visually induced self-motion perception (vection) on upright standing posture p 214 A93-31531

Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 A93-24398

### WATANABE, Y.

Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572

### WATENPAUGH, D. E.

Intramuscular pressure and electromyography as indexes of force during isokinetic exercise p 380 A93-49291

Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295

### WATENPAUGH, DONALD E.

Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968

Transcapillary fluid responses to lower body negative pressure p 380 A93-49292

### WATERHOUSE, BARRY D.

The role of central monoaminergic systems in arousal and selective attention [AD-A258500] p 122 A93-18264

### WATERS, S. A.

Optimal design of composite hip implants using NASA technology p 174 A93-22188

### WATSON, CHARLES S.

Institute for the Study of Human Capabilities [AD-A256091] p 69 A93-14427

### WATSON, LAURANCE A.

Prevalence of corrective lens wear in Royal Australian Air Force flight crews p 289 A93-41173

### WATSON, N. V.

Space and cognition - The measurement of behavioral functions during a 6-day space mission p 405 A93-55164

### WATT, D. G. D.

Effects of long-term weightlessness on roll circularvection p 279 A93-39725

### WAUGH, D. A.

Principles for integrating voice I/O in a complex interface p 146 A93-19774

### WAUGH, P. J.

The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 A93-19671

### WAVERING, ALBERT

A manipulator control testbed - Implementation and applications [AAS PAPER 92-054] p 392 A93-50594

### WAXMAN, ALLEN M.

Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision [AD-A256059] p 58 A93-14580

### WEATHERSBY, E. D.

Statistically based decompression tables 8: Linear-exponential kinetics p 120 A93-17926  
[AD-A257613]

### WEATHERSBY, P. K.

Statistically based decompression tables. 7: Selection and treatment of primary air and N2O2 data [AD-A259090] p 172 A93-20587

### WEBB, JAMES T.

Complement proteins and decompression sickness susceptibility [AD-A254448] p 50 A93-12905

### WEBB, JOHANNA

The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality [SAE PAPER 921266] p 300 A93-41436

### WEBBER, W. ROBERT S.

Automatic detection of seizures with applications p 254 A93-25592

### WEBBON, BRUCE W.

Human support for Mars exploration - Issues and approaches p 27 A93-12077  
Metabolic responses to simulated extravehicular activity [SAE PAPER 921303] p 282 A93-41468

Extravehicular activity technology discipline p 314 A93-27859

### WEBER, CHRISTOPH

CVA, cockpit design and development tool p 147 A93-19780

### WEBSTER, LAURIE

The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRIN) p 258 A93-25595

### WEDDENDORF, BRUCE

Wheels for wheelchairs and the like [NASA-CASE-MFS-28632-1] p 106 A93-17042

Portable seat lift p 106 A93-17045  
[NASA-CASE-MFS-28610-1]

Design of a portable powered seat lift p 195 A93-22190

Platform stair lift [NASA-CASE-MFS-28772-1] p 353 A93-29845

Prosthetic elbow joint [NASA-CASE-MFS-28707-1] p 354 A93-30566

### WEE, LIANG-BOON

Space based robot manipulators - Dynamics of contact and trajectory planning for impact minimization p 135 A93-22827

### WEGMANN, H. M.

Pre-adaptation to shiftwork in space p 386 A93-52403

### WEGMANN, HANS-MARTIN

Response of the circadian system to 6 deg head-down tilt bed rest p 117 A93-24045

### WEIDMANN, P.

Does drinking protect against mountain sickness? p 382 A93-49565

### WEIGL, HARALD

Robot free-flyers in space extravehicular activity p 193 A93-29141

### WEIGL, HARALD J.

Kalman-filter-based machine vision for controlling free-flying unmanned remote vehicles p 135 A93-22916

### WEINBERG, IRVING N.

Automated system for early breast cancer detection in mammograms p 253 A93-25568

### WEINSTEIN, CURT DAVID

The challenge of biodetection for screening persons carrying explosives p 159 A93-21931

### WEINSTEIN, LISA F.

HUD climb/dive ladder configuration and unusual attitude recovery p 185 A93-27129

Head-up display standardization and the utility of analog vertical velocity information during instrument flight p 189 A93-27451

Utility of a ghost horizon and climb/dive ladder line tapering on a head-up display [AD-A264401] p 353 A93-30167

### WEINSTEIN, SIDNEY

The challenge of biodetection for screening persons carrying explosives p 159 A93-21931

### WEIR, F. W.

Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705

### WEISBIN, C. R.

NASA's telerobotics research program p 263 A93-35566



- WEISS, FRED R.**  
Protective helmet assembly  
[NASA-CASE-MSC-21842-1] p 106 N93-17088
- WEISS, J. F.**  
Recommended radiobiological studies for a Lunar-Based Chemical/Biological/Medical Analysis Laboratory (LBCAL) p 39 A93-17429
- WEISS, M. S.**  
A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672
- WEISSMAN, PAUL**  
Helmet-mounted area of interest p 228 A93-30060  
Helmet-mounted area-of-interest display  
[AD-A258275] p 139 N93-18029
- WELCH, JACK L.**  
Human factors applications in control systems design for ground testing of turbine engines p 409 A93-54410
- WELCH, ROBERT B.**  
Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 A93-51959
- WELHAM, DAVID**  
Advances in training technology and the role of the instructor p 98 A93-18775
- WELLEKENS, CHRISTIAN J.**  
The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft p 146 N93-19772
- WELLS, ANDREW T.**  
Measuring hearing protection device performance using the metronics db-3100 sound level analyzer (dosimeter)  
[AD-A260852] p 265 N93-25787
- WELLS, MAXWELL J.**  
The effects of head and sensor movement on flight profiles during simulated dive bombing p 185 A93-27131
- WELSH, C. H.**  
Operation Everest II - Spirometric and radiographic changes in acclimatized humans at simulated high altitudes p 383 A93-49574
- WEN, XIULAN**  
Protective effects of *Rhodiola crenulata* on rats under antithrombotic position and professional athletes p 327 A93-44843
- WENDEL, WENDEL R.**  
Evolving concepts of lunar architecture: The potential of subelene development p 107 N93-17447
- WENSVEEN, JANICE**  
Design of a reading test for low vision image warping p 400 A93-53025
- WENZEL, ELIZABETH M.**  
Headphone localization of speech stimuli p 176 A93-27143  
Headphone localization of speech p 394 A93-52507
- WENZEL, M.**  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556
- WERBLIN, FRANK S.**  
Computer based analysis and synthesis of retinal function  
[AD-A260514] p 221 N93-24420
- WERCHAN, PAUL M.**  
Acceleration-induced effects on baboon blood chemistry p 376 A93-49224  
Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC)  
[AD-A264492] p 335 N93-30400
- WERNER, ROBERT P.**  
An update on the readiness of vapor compression distillation for spacecraft wastewater processing  
[SAE PAPER 921114] p 290 A93-41307
- WERNETH, RUSSEL**  
The Servicing Aid Tool p 192 A93-29116
- WERNICK, JANE**  
Vertical regolith shield wall construction for lunar base applications p 107 N93-17446
- WESNSTEN, NANCY J.**  
Effects of simulated high altitude exposure on long-latency event-related brain potentials and performance p 117 A93-24042
- WEST, JOHN B.**  
Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity p 386 A93-52617
- WEST, PHILIP R.**  
Performance evaluation of candidate space suit elements for the next generation orbital EMU  
[SAE PAPER 921344] p 305 A93-41503
- WESTCOTT, J. Y.**  
Endotoxin priming followed by high-altitude causes pulmonary edema in rats p 323 A93-42186
- WESTERTEP, KLAAS R.**  
Energy expenditure climbing Mt. Everest p 92 A93-20031
- WESTON, M. E.**  
Viral hepatitis in the US Air Force, 1980 - 1989 p 15 N93-11287
- WESTON, MARY**  
Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297
- WESTON, MARY E.**  
Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force p 16 N93-11292
- WEVER, A. M. J.**  
Phadiatop: A screening test for inhalant allergy p 21 N93-11313
- WHARTON, R. A., JR.**  
The possibility of life on Mars during a water-rich past p 196 A93-27887
- WHEELER, R.**  
Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715
- WHEELER, R. M.**  
Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997
- WHEELER, RAY**  
Controlled Ecological Life Support System (CELSS) modeling p 137 A93-25308  
OCAM - A CELSS modeling tool: Description and results  
[SAE PAPER 921241] p 298 A93-41413
- WHEELER, RICHARD R., JR.**  
Regenerable Microbial Check Valve - Life cycle tests results  
[SAE PAPER 921316] p 303 A93-41478  
Regenerable biocide delivery unit, volume 1  
[NASA-CR-185701-VOL-1] p 274 N93-27122  
Regenerable biocide delivery unit, volume 2  
[NASA-CR-185701-VOL-2] p 275 N93-27360
- WHELAN, S. M.**  
Influence of animation on dynamical judgments p 180 A93-28692
- WHELAN, SUSAN M.**  
Influence of animation on dynamical judgments p 98 A93-20275
- WHINNERY, JAMES E.**  
Statistical analysis of the human strangulation experiments: Comparison to +Gz-induced loss of consciousness  
[AD-A255485] p 54 N93-14789
- WHITAKER, LESLIE A.**  
A cognitive classification of pilot performance in air combat p 347 A93-42814
- WHITCRAFT, ROBERT J.**  
Helmet-mounted display for the night attack mission p 228 A93-30059
- WHITE, BARRIE D.**  
The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989 p 118 A93-25201  
The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202
- WHITE, DAVID C.**  
Biofilm ecology of bioluminescent bacteria  
[AD-A255282] p 42 N93-14532
- WHITE, MARVIN H.**  
Electrically modifiable nonvolatile SONOS synapses for electronic neural networks  
[AD-A258318] p 122 N93-18252
- WHITE, R. G.**  
Keeping the pilot in the loop p 29 A93-13413
- WHITE, VICKY L.**  
The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident  
[AD-A254550] p 49 N93-12612
- WHITEHURST, TROY N., JR.**  
Space Station Freedom food management  
[SAE PAPER 921248] p 298 A93-41419
- WHITESTONE, JENNIFER J.**  
Methods for characterizing the human head for the design of helmets  
[AD-A263875] p 353 N93-29889
- WHITFORD, HOWARD W.**  
Water purification, microbiological control, sterilization and organic waste decomposition using an electrochemical advanced ozonation process  
[SAE PAPER 921234] p 297 A93-41408
- WHITMIRE, DANIEL P.**  
Habitable zones around main sequence stars p 197 A93-28376
- WHITMORE, MIHRIBAN**  
Individual differences in computerized test performance for systems integration in cockpit management p 177 A93-27176
- WHITSON, P. A.**  
Atrial natriuretic peptide degradation by CPA47 cells - Evidence for a divalent cation-independent cell-surface proteolytic activity p 155 A93-28726
- WHITTAM, J. H.**  
Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise  
[NASA-TM-103942] p 255 N93-26133
- WICHMAN, HARVEY**  
Crew performance in Spacelab p 176 A93-27169
- WICK, DANIEL T.**  
Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188
- WICKENS, CHRISTOPHER D.**  
Distance and organization in multifunction displays p 102 A93-19986  
Electronic map interpretation in a dual-task context p 176 A93-27144  
S-R compatibility effects with orthogonal stimulus and response dimensions p 179 A93-27194  
Overconfidence, preview, and probability in strategic planning p 179 A93-27195  
Compatibility and consistency in display-control systems - Implications for aircraft decision aid design p 230 A93-30454
- WICKRAMASINGHE, NALINIE S. M. D.**  
Experimental studies on the origin of the genetic code and the process of protein synthesis - A review update p 73 A93-17822
- WIDDEL, FRIEDRICH**  
Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280
- WIELAND, PAUL**  
Environmental control and life support system evolution p 311 N93-27719  
Marshall Space Flight Center ECLSS technology activities p 312 N93-27724
- WIENER, EARL L.**  
Cockpit checklists - Concepts, design, and use p 389 A93-52506
- WIENHOLD, K.**  
Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972
- WIERWILLE, W. W.**  
Recommendations for mental workload measurement in a test and evaluation environment p 394 A93-52504
- WIEST, G.**  
OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571  
Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 N93-24366
- WIGNARAJAH, K.**  
Incineration for resource recovery in a closed ecological life support system p 409 A93-54826
- WIKSWO, JOHN, JR.**  
The AFOSR Workshop on the Future of EEG and MEG  
[AD-A264338] p 335 N93-30160
- WILCOX, BRUCE C., JR.**  
Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft  
[AD-A253648] p 31 N93-11279
- WILCOX, BRUCE, JR.**  
Comparison of portable crewmember protective breathing equipment (CPBE) designs  
[DOT/FAA/AM-93/6] p 310 N93-27121
- WILD, EDWIN T.**  
Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training p 98 A93-18773
- WILDE, RICHARD C.**  
Evolution of Space Station EMU PLSS technology recommendations p 312 N93-27790
- WILDRUBE, GREGORY**  
SHARC: Space Habitat, Assembly and Repair Center  
[NASA-CR-192031] p 140 N93-18153
- WILEY, KENNETH D.**  
An improved anthropometric test device p 143 N93-19670
- WILEY, LARRY**  
I-NIGHTS and beyond p 227 A93-30054
- WILEY, ROGER W.**  
The effects of pyridostigmine bromide on visual performance p 87 A93-18034
- WILKINSON, P. R.**  
The integration of advanced cockpit and systems design p 147 N93-19779

## WILKINSON, R.

Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697

## WILLE, K. K.

Fluorocarbon 113 exposure and cardiac dysrhythmias among aerospace workers p 168 A93-28739

## WILLEMS, G. C.

A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 A93-19672

## WILLFORD, DAVID C.

Increased plasma O<sub>2</sub> solubility improves O<sub>2</sub> uptake of in situ dog muscle working maximally p 111 A93-21684

## WILLIAMS-CAVENDER, K.

Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705

## WILLIAMS, ALAN D.

Membrane technology for zero gravity life support systems [SAE PAPER 921320] p 304 A93-41482

## WILLIAMS, CAROL S.

Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935

## WILLIAMS, DOUGLAS W.

Anaerobic treatment of organic wastes from Controlled Ecological Life Support Systems [SAE PAPER 921272] p 301 A93-41442

## WILLIAMS, HENRY P.

Electronic map interpretation in a dual-task context p 176 A93-27144

## WILLIAMS, MARK

Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223

## WILLIAMS, MARY

Behavioral asymmetries of psychomotor performance in rhesus monkeys (*Macaca mulatta*) - A dissociation between hand preference and skill p 339 A93-44923

## WILLIAMS, REDFORD B., JR.

Human stress - Measurement and consequences p 49 A93-17440

## WILLIAMS, STEVEN P.

Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895  
Depth-viewing-volume increase by collimation of stereo 3-D displays p 407 A93-52915  
In-simulator assessment of trade-offs arising from mixture of color cuing and monocular, binocular, and stereopsis cuing information p 407 A93-52916

## WILLIAMS, WILLIAM J.

Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21) [AD-A253393] p 30 A93-10217

## WILLIAMSON, J. W.

Aerobic fitness. I - Response of volume regulating hormones to head-down tilt p 167 A93-28721

## WILLIAMSON, JON W.

Hormonal responses during orthostasis following 4 hours of head-down tilt p 379 A93-49221

## WILLIAMSON, REBECCA C.

Metabolic responses to simulated extravehicular activity [SAE PAPER 921303] p 282 A93-41468

## WILLIAMSON, S. J.

Cognition and the brain [AD-A255483] p 59 A93-14788  
Duration of alpha suppression increases with angle in a mental rotation task p 260 A93-26435

## WILLIAMSON, SAMUEL J.

Neuromagnetic investigation of cortical regions underlying short-term memory [AD-A261445] p 261 A93-26521

## WILLIAMSON, SAMUEL J.

Neuromagnetic investigations of cortical regions underlying short-term memory [AD-A255788] p 58 A93-14646

Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate [AD-A261593] p 260 A93-26436

The AFOSR Workshop on the Future of EEG and MEG [AD-A264338] p 335 A93-30160

## WILLKE, DONALD T.

Upper interior head protection. Volume 1. The development of a research test procedure [PB93-113769] p 194 A93-21537

Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 A93-21795

## WILLSHIRE, KELLI F.

Human factors evaluation of the HL-20 full-scale model p 409 A93-53746  
EVA and telerobot interaction p 312 A93-27792

## WILLSHIRE, WILLIAM L., JR.

Human factors evaluation of the HL-20 full-scale model p 409 A93-53746

## WILMINGTON, R. P.

Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system [NASA-CR-185689] p 34 A93-12211

## WILMINGTON, ROBERT

Evaluation of lens distortion errors in video-based motion analysis [NASA-TP-3266] p 258 A93-25736

## WILMINGTON, ROBERT P.

Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers [NASA-CR-185679] p 34 A93-12195

## WILSON, DENISE L.

Effects of display luminance on the recognition of color symbols on similar color backgrounds p 189 A93-27191

Theory of signal detection and its application to visual target acquisition: A review of the literature [AD-A262920] p 288 A93-28307

## WILSON, G. F.

The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB [AD-A254840] p 27 A93-12432

## WILSON, GLENN F.

Cardiorespiratory measures of workload during continuous manual performance p 160 A93-27192

## WILSON, J. W.

Track structure model for damage to mammalian cell cultures during solar proton events p 75 A93-18073  
Human exposure to galactic cosmic rays in space p 410 A93-54887

## WILSON, JOHN W.

Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission p 60 A93-13817

Interplanetary crew exposure estimates for galactic cosmic rays p 87 A93-17975  
Katz model prediction of *Caenorhabditis elegans* mutagenesis on STS-42 [NASA-TM-4383] p 50 A93-13023

## WILSON, STEVE

Target fragmentation in radiobiology [NASA-TM-4408] p 124 A93-18381

## WILSON, STEVE

The role of Environmental Health System air quality monitors in Space Station Contingency Operations [SAE PAPER 921414] p 310 A93-41565

## WILSON, STEVEN

First entry operations for spacecraft [SAE PAPER 921384] p 308 A93-41542

## WIMBUSH, R. M.

Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 A93-28853

## WINFIELD, DANIEL L.

Digital mammography, cancer screening: Factors important for image compression p 221 A93-24551

## WING, MICHAEL R.

The origin of the polycyclic aromatic hydrocarbons in meteorites p 110 A93-17983

## WING, PETER C.

Study design for microgravity human physiology experiments p 118 A93-25208

## WINKLER, H. E.

Shuttle Orbiter Environmental Control and Life Support System - Flight experience [SAE PAPER 921348] p 305 A93-41507

## WIRQUIN, E.

Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567

## WISE, JAMES A.

Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309

## WISE, JAMES D.

A distributed telerobotics system for space operations p 192 A93-29132

## WISMANS, J.

Occupant simulation as an aspect of flight safety research p 142 A93-19665

## WITT, L. A.

Organizational politics, participation in decision-making, and job satisfaction [DOT/FAA/AM-92/17] p 257 A93-25203

## WITTEN, MARK L.

The chronic effects of JP-8 jet fuel exposure on the lungs [AD-A264162] p 334 A93-30153

## WITTENBERG, L. J.

Potential of derived lunar volatiles for life support p 67 A93-13998

## WITTIG, T.

Monitoring of pilot actions as part of a knowledge-based system for pilot assistance p 59 A93-15184  
Pilot intent and error recognition as part of a knowledge-based cockpit assistant p 318 A93-28855

## WOJCIK, PIOTR

Knowledge-based task planning for the Special Purpose Dextrous Manipulator p 191 A93-29110

## WOJCIK, Z. A.

Ground operation of the mobile servicing system on Space Station Freedom p 190 A93-29107

## WOLBARSH, MYRON L.

Retinal information processing for minimum laser lesion detection and cumulative damage [AD-A259195] p 171 A93-20563

## WOLDSTAD, JEFFREY C.

Movement tracking performance as a function of required force level p 177 A93-27171

## WOLF-WATZ, H.

Plasmid encoded virulence of *Yersinia* [FOA-B-40419-4.4] p 275 A93-28199

## WOLF-WATZ, HANS

Intracellular targeting of the *Yersinia* YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 A93-27989

## WOLF, D. A.

Rotating-wall vessel coculture of small intestine as a prelude to tissue modeling - Aspects of simulated microgravity p 471 A93-28765

## WOLF, DAVID A.

Method for culturing mammalian cells in a perfused bioreactor [NASA-CASE-MS-21293-2] p 4 A93-10109

Method for culturing mammalian cells in a horizontally rotated bioreactor [NASA-CASE-MS-21294-2] p 5 A93-10110

## WOLFE, W. H.

Viral hepatitis in the US Air Force, 1980 - 1989 p 15 A93-11287

## WOLFE, WILLIAM H.

Immunological parameters in current and former US Air Force personnel p 16 A93-11295

## WOLK, C. P.

Interdisciplinary research and training program in the plant sciences [DE92-015919] p 5 A93-10835

## WONG, TIANXIANG

The effects of cephalad body fluid redistribution on the ultrastructure of the vestibular apparatus of guinea pig p 4 A93-13717

## WONG, WILLIAM W.

Comparison of total body water estimates from O-18 and bioelectrical response prediction equations [NASA-TP-3299] p 218 A93-23734

## WOOD, C. C.

Functional MRI studies of human vision on a clinical imager [DE92-017448] p 49 A93-12566

## WOOD, CHARLES D.

Pharmacological countermeasures against motion sickness p 404 A93-55945

## WOOD, EARL H.

Potential hazards of high anti-Gz suit protection p 48 A93-16164

## WOOD, H. J., JR.

Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 A93-23082

## WOOD, KATHRYN J.

The prevalence of artificial lens implants in the civil airman population [DOT/FAA/AM-92/14] p 253 A93-25214

## WOOD, MICHAEL G.

Oxygen generation by static feedwater electrolysis for Space Station Freedom [SAE PAPER 921151] p 293 A93-41335

## WOODARD, D.

Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712

## WOODARD, DANIEL

Mapping of electrical muscle stimulation using MRI p 279 A93-40549

Phenytol as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162

## WOODMAN, CHRISTOPHER R.

Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats p 323 A93-42192

Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178

Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179

- WOODRUFF, KENNETH J.**  
Evaluation of lightweight and low profile communications devices for Respiratory Protective system 21 (RESPO 21)  
[AD-A253393] p 30 A93-10217
- WOODRUFF, SUSAN I.**  
The US Navy Healthy Back Program: Effect on back knowledge among recruits  
[AD-A258368] p 121 A93-18210
- WOODRUFF, WALTER**  
Increasing hits and reducing misses in CRM/LOS scenarios - Guidelines for simulator scenario development p 286 A93-39575
- WOODS, DAVID D.**  
Pilot interaction with cockpit automation - Operational experiences with the Flight Management System p 189 A93-27455
- WOODS, K. M.**  
Effects of antithrostatic suspension and corticosterone on macrophage and spleen cell function p 153 A93-28693
- WOODWARD, B.**  
Microwave digestion preparation and ICP determination of boron in human plasma p 377 A93-49570
- WOODWARD, J.**  
Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals [DE93-006235] p 276 A93-28890
- WOOLFORD, BARBARA**  
An improved simulation based biomechanical model to estimate static muscle loadings p 160 A93-27172
- WORDEN, EDSON A.**  
Simplified analysis of water distribution for Space Station Freedom  
[SAE PAPER 921230] p 296 A93-41404
- WORGUL, B. V.**  
Accelerated heavy particles and the lens. VIII - Comparisons between the effects of acute low doses of iron ions (190 keV/microns) and argon ions (88 keV/microns) p 216 A93-32784
- WORKMAN, GARY L.**  
Physical and digital simulations for IVA robotics p 391 A93-49445
- WRAIGHT, MICHAEL**  
Training analysis for the European Fighter Aircraft - 'A voyage into the unknown' p 98 A93-18769
- WRIGHT, J. C.**  
The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential p 148 A93-19782
- WU, A. H.**  
The clinical chemistry and immunology of long-duration space missions p 169 A93-28754
- WU, GUIRONG**  
Identification of degree of head injury caused by impact loads in dog and rabbit p 4 A93-13720
- WU, J. Y.**  
Chronobiology in a moon-based chemical analysis and physiologic monitoring laboratory p 48 A93-17439
- WU, JIAN-PING**  
EEG changes in man during motion sickness induced by parallel swing p 92 A93-19996
- WU, JIANMIN**  
Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074
- WU, L. C.**  
Quantitative autoradiographic analysis of muscarinic cholinergic and GABAA (benzodiazepine) receptors in the forebrain of rats flown on the Soviet Satellite COSMOS 2044 p 156 A93-28743
- WU, T. Y.**  
Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560
- WU, WENCAN**  
Analysis of factors influencing contrast vision in normal eyes p 332 A93-44848
- WURTMAN, J. J.**  
A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918
- WURTMAN, R. J.**  
Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids p 160 A93-27048  
A balanced carbohydrate:protein diet in the management of Parkinson's disease p 153 A93-27918  
Persistent blockade of potassium-evoked serotonin release from rat frontocortical terminals after fluoxetine administration p 202 A93-32125  
Alanine increases blood pressure during hypotension p 203 A93-33027  
Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028  
Melatonin concentrations in the sudden infant death syndrome p 203 A93-33030
- WURTMAN, RICHARD**  
Facilitation of levodopa-induced dyskinesias by dietary carbohydrates p 203 A93-33029
- WURTMAN, RICHARD J.**  
Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500  
Tryptophan availability modulates serotonin release from rat hypothalamic slices p 152 A93-27000  
Effect of chronic D-fenfluramine administration on rat hypothalamic serotonin levels and release p 152 A93-27049  
Dopamine release in rat striatum - Physiological coupling to tyrosine supply p 152 A93-27050  
Differential effects of insulin resistance on leucine and glucose kinetics in obesity p 152 A93-27224  
Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens p 201 A93-32118  
Serotonin release varies with brain tryptophan levels p 201 A93-32119  
Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate p 214 A93-32120  
Melatonin in human preovulatory follicular fluid p 215 A93-32474  
Effects of dietary amino acids, carbohydrates, and choline on neurotransmitter synthesis p 204 A93-33031  
Effects of their nutrient precursors on the synthesis and release of serotonin, the catecholamines, and acetylcholine - Implications for behavioral disorders p 204 A93-33033  
The pineal gland - Its possible roles in human reproduction p 204 A93-33036  
Tyrosine - Effects on catecholamine release p 204 A93-33038
- WYBORN, W.**  
Mir 1992 operations and crew training p 226 A93-24352
- WYDEVEN, T.**  
Incineration for resource recovery in a closed ecological life support system p 409 A93-54826
- WYMAN, C. E.**  
Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals [DE93-006235] p 276 A93-28890
- WYMAN, CHARLES E.**  
Life support research and development for the Department of Energy Space Exploration Initiative p 137 A93-25309
- X**
- XIA, HOUCUN**  
Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System p 28 A93-12222
- XIANG, QIU-LU**  
The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690  
Method of selection of astronauts cardiovascular regulative function under simulated weightlessness p 91 A93-19995  
Effect of simulated weightlessness on microvessel permeability of various organs in rabbits p 199 A93-30438
- XIANG, QIULU**  
Changes of REG during 4h head-down bed-rest p 46 A93-16075  
Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness p 327 A93-44842
- XIAO, HONG-LIAO**  
The optimum design of personal liquid cooling system p 60 A93-14314
- XIAO, HUAJUN**  
Human factors in design of military aircrafts' oxygen supply equipment p 60 A93-14222
- XIE, BAO-SHENG**  
Effects of +Gz stress on human body p 92 A93-19997
- XIE, BAOSHENG**  
Observation of change in cytochrome oxidase content of cerebral cortex in rat under +Gz stress p 3 A93-13543  
Effect of hypergravity on astronauts in space flight p 48 A93-16254
- XIE, DAQING**  
Review of the space medico-engineering research in China  
[AAS PAPER 91-623] p 402 A93-55802
- XIE, WEI**  
A software for testing human's ability to trouble-shoot in the condition of multitask p 29 A93-13537
- XIE, WEIXIN**  
Spectral analysis of visual symbols p 30 A93-13718
- XIU, GAN-YUAN**  
The optimum design of personal liquid cooling system p 60 A93-14314
- XU, GUOLIN**  
The evaluation of tolerance to serious acute hypoxia in humans p 11 A93-13715
- XU, JIANKE**  
Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517
- XU, LI-HUA**  
The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690
- XU, SHENGQUO**  
Design of ion source of respiratory mass spectrometer p 11 A93-13713
- XU, YAFU**  
Analysis of factors influencing contrast vision in normal eyes p 332 A93-44848
- XUAN, YUXIA**  
Investigation on requirements for ejection acceleration measuring system p 332 A93-44847
- Y**
- YABUSHITA, S.**  
Organic models of interstellar grains p 35 A93-11847  
Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561
- YACAVONE, D. W.**  
Mishap trends and cause factors in naval aviation - A review of Naval Safety Center data, 1986-90 p 405 A93-55166
- YADEN, DAVID B., JR.**  
The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 A93-26082
- YAFFE, MARTIN J.**  
Digital mammography, cancer screening: Factors important for image compression p 221 A93-24551
- YAJIMA, K.**  
Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572
- YAJIMA, KAZUYOSHI**  
Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge p 379 A93-49178  
Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179  
Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220
- YAKOVLEV, V. M.**  
Changes in the phospholipid and cholesterol content of rat tissues during adaptation to high altitude at different environmental temperatures p 358 A93-47100
- YALUG, O.**  
Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 A93-19660
- YAMAGUCHI, DEAN T.**  
Cellular immunosenescence - An overview p 80 A93-20663
- YAMAGUCHI, ISAO**  
Optimal manipulator trajectories for space robots  
[AAS PAPER 91-669] p 410 A93-55838
- YAMAGUCHI, M.**  
Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity p 168 A93-28736
- YAMAMOTO, CHIKASHI**  
Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029
- YAMAMOTO, KANHACHIRO**  
Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306
- YAMAMOTO, Y.**  
Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404
- YAMAMOTO, YOSHIKAKI**  
Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306
- YAMANE, KEISUKE**  
Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot  
[AIAA PAPER 93-3863] p 392 A93-51449
- YAMASHITA, H. I.**  
Visual search in virtual environments p 233 A93-33450

# YAMASHITA, KATSUMASA

## YAMASHITA, KATSUMASA

Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats p 398 A93-55329

## YAMASHITA, MASAMICHI

Telescence testbedding for physiological experiments under hypobaric hypoxic conditions p 220 A93-24398  
Japanese treefrog experiment onboard the Space Station Mir p 210 A93-24402

## YAN, XIAO-XIA

The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690

## YANAGAWA, HIROSHI

An experimental approach to chemical evolution in submarine hydrothermal systems p 74 A93-18008  
Future research p 74 A93-18010

## YANAGIDAIRA, Y.

Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560

## YANAGIDAIRA, YASUNORI

Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats p 75 A93-18039

## YANAGISAWA, K.

Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560

## YANAKA, TADAO

The effect of G-experience on heart rate during +Gz loading p 333 A93-45322

## YANCY, CLYDE W.

Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968

## YANG, GUANGHUA

Protective effects of *Rhodiola crenulata* on rats under antithrostatic position and professional athletes p 327 A93-44843

## YANG, TIAN-DE

Dynamic characteristic of changes of oxygen saturation of blood hemoglobin under conditions of acute hypoxia in human body p 91 A93-19993

## YANG, YING-BO

Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177

## YANG, ZHONGQIANG

Effects of acute hypoxia on intracranial dynamics in unanesthetized goats p 326 A93-44177

## YANTIS, STEVEN

Involuntary attentional capture by abrupt onsets p 97 A93-17974

## YASUDA, KEIKO

Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 A93-28032

## YEAZEL, LOUISE M.

Pilot performance with blood alcohol concentrations below 0.04 percent p 46 A93-16151

## YEH, YEI-YU

Spatial judgments with monoscopic and stereoscopic presentation of perspective displays p 102 A93-19988  
Visibility of transmissive liquid crystal displays under dynamic lighting conditions p 103 A93-19990

## YENDLER, BORIS S.

An approach to the functional optimization of the CELSS Test Facility [SAE PAPER 921199] p 295 A93-41375

## YESA VAGE, J.

Influence of aging and practice on piloting tasks p 286 A93-39708

## YESA VAGE, JEROME

The time-course of alcohol impairment of general aviation pilot performance in a Frasca 141 simulator p 384 A93-52299

## YEVICH, S. D. HART

Nutritional assessment of United States tactical air command pilots p 367 A93-32242

## YEVICH, S. J.

Nutritional assessment of United States tactical air command pilots p 367 A93-32242

## YOKOGOSHI, H.

Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720

## YOKOTA, H.

Early amphibian (anuran) morphogenesis is sensitive to novel gravitational fields p 156 A93-28745  
Altering the position of the first horizontal cleavage furrow of the amphibian (*Xenopus*) egg reduces embryonic survival p 272 A93-39717

## YON, L.

Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561

## YONETANI, SHOZO

Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898

## YOON, SUNG H.

Recognition of partially occluded threat objects using the annealed Hopfield network p 142 A93-19466

## YOSHIMURA, KENJIRO

Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548

## YOSHIOKA, TOSHITADA

Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 A93-15526

Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats p 398 A93-55329

## YOSHIZAWA, NAOKI

Conceptual study of manned lunar surface site p 316 A93-28031

## YOST, WILLIAM A.

Auditory processing of complex sounds across frequency channels [AD-A253612] p 13 A93-10650

## YOUNG, A. J.

Sustaining health and performance in the cold: Environmental medicine guidance for cold-weather operation [AD-A254328] p 23 A93-12145

Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations [AD-A259625] p 218 A93-24021

## YOUNG, L. R.

Effects of long-term weightlessness on roll circarvection p 279 A93-39725

## YOUNG, MICHAEL J.

A cognitive architecture for human performance process model research [AD-A261040] p 258 A93-25815

## YOUNG, PATRICIA M.

Operation Everest II - Metabolic and hormonal responses to incremental exercise to exhaustion p 115 A93-21685

## YOUNG, ROBERT W.

Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements [AD-A262872] p 351 A93-29484

## YOUNG, RONALD B.

Establishing laboratory standards for biological flight experiments [NASA-CR-184402] p 40 A93-12901

## YOUNG, WILLIE C.

Contribution of personality to the prediction of success in initial air traffic control specialist training [DOT/FAA/AM-93/4] p 259 A93-26138

## YOUNGBLOOD, WALLACE W.

Increased fire and toxic contaminant detection responsibility by use of distributed, aspirating sensors p 311 A93-27722

## YOUNIS, L. T.

Carbon monoxide exposure of subjects with documented cardiac arrhythmias [PB93-179943] p 337 A93-30890

## YU, BINGLIANG

Experimental study of volatile metabolites of human body p 11 A93-13711

## YU, F. S.

A physician's workstation designed for NASA and earth-based applications p 189 A93-28695

## YU, Q. P.

Modulation of respiratory responses to carotid sinus nerve stimulation by brain hypoxia p 79 A93-20038

## YU, XUNBING

Skin temperature and heat flow of head-neck region under different ambient temperatures p 46 A93-16074

## YUMIKURA, SEI

Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220

## YUNG, JENNY E.

Recovering potable water from wastewater in space platforms by lyophilization [SAE PAPER 921323] p 304 A93-41485

## YURUGI, RYOHEI

Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 A93-15526

## YUSHIN, V. A.

Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773

# PERSONAL AUTHOR INDEX

## Z

## ZACHARIAS, GREG L.

Multistage integration model for human egomotion perception [AIAA PAPER 93-3564] p 406 A93-52664

## ZACHARY, WAYNE W.

Experimental validation of the attention switching component of the COGNET framework p 186 A93-27141

## ZAFF, BRIAN S.

Computer-supported collaborative work - A new agenda for human factors engineering p 348 A93-42841

## ZAHNER, G.

Rated performance, cardiovascular and quantitative EEG parameters during simulated instrument flight under the effect of terfenadine p 165 A93-28708

## ZAITLIN, MILTON

Center of Excellence in Biotechnology (Research) [AD-A263598] p 330 A93-29915

## ZAITSEVA, L. B.

Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254

## ZAK, H.

Operator performance with alternative manual control modes in teleoperation p 390 A93-49397

## ZAKHAROV, S. D.

Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228

## ZAKLAD, ALLEN

Ocular attention-sensing interface system [NASA-CR-190884] p 65 A93-13450

## ZAKLAD, ALLEN L.

Application and validation of workload assessment techniques [AD-A264575] p 366 A93-32012

## ZANETTI, A. R.

Vaccination against Hepatitis B: The Italian strategy p 15 A93-11289

## ZAPATA, EDUARDO

Interactive and cooperative sensing and control for advanced teleoperation p 391 A93-49443

## ZATZ, MARTIN

The Gordon Research Conference on Pineal Cell Biology [AD-A264840] p 337 A93-30904

## ZAVADOVSKII, A. F.

Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255

## ZECHNER, BRIAN

Procedures for the diagnostic dose resistance test kits for mosquitoes, body lice, and beetle pests of stored products [AD-A255224] p 51 A93-13941

## ZEIER, HANS

Psychophysiological stress research - Methodology and results of an investigation involving air traffic controllers [ISBN-3-258-04585-2] p 97 A93-17971

## ZELIGS, B. J.

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 A93-11306

## ZELLER, JOSEPH L., JR.

An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission [AD-A254984] p 35 A93-12509

## ZELLNER, JOHN W.

An improved anthropometric test device p 143 A93-19670

## ZERULL, ROBERT G.

Myocardial infarction occurring at the conclusion of centrifuge training in a 37-year-old aviator p 89 A93-18044

## ZGHAL, H.

Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846

## ZHAI, SHUMIN

A telerobotic virtual control system p 183 A93-27030

## ZHANG, HONGZHI

Protective effects of *Rhodiola crenulata* on rats under antithrostatic position and professional athletes p 327 A93-44843

## ZHANG, JINGXUE

Preliminary study on the physiological changes and tolerance in ground squirrels under several specific experimental conditions p 2 A93-13532

## ZHANG, QIJI

Preliminary investigation on personality of pilots p 24 A93-13541

**ZHANG, RUGUO**

- Effects of different inhalant O<sub>2</sub> concentrations on ventilatory and heart rate kinetic responses during exercise p 11 A93-13707  
Problems of respiratory physiology during space flight p 332 A93-44849

**ZHANG, Y.**

- Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560

**ZHANG, YONGFA**

- Experimental research on the anti-irradiation effects of KW-1 - Protective effect on the 5-HT content of tissues in irradiated mice p 3 A93-13542

**ZHANG, YUMING**

- Human factors in design of military aircrafts' oxygen supply equipment p 60 A93-14222

**ZHAO, GUOXUAN**

- Characteristics of heart rate response (HRR) in young men during exercise p 10 A93-13706

**ZHAO, XU**

- Relationship between ERP and workload in manual control p 30 A93-13721

**ZHAO, YUANHUI**

- Value of frequency domain correlative cardiography (FCG) to early diagnosis of coronary heart disease p 10 A93-13705

**ZHENJIANG, CUI**

- Postoperative hyperbaric oxygen treatment of peripheral nerve damage [AD-A255842] p 52 N93-14084

**ZHILIAEV, S. IU.**

- Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293  
The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294

**ZHOU, CHUAN-DAI**

- Self-organizing character of alpha wave in EEG due to acute hypoxic hypoxia in normal subjects p 213 A93-30436

**ZHOU, YUNLONG**

- Effects of sustained +Gz stress on BAEP in waked rabbits p 10 A93-13531  
Effects of +Gz stress on medium- and long-latency auditory evoked responses p 11 A93-13708

**ZHOU, ZHEN-LEI**

- Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator p 407 A93-53038

**ZHUANG, DAHENG**

- Radiation dose measurement and biostack experiment in biocabin on board satellite p 327 A93-44845

**ZHUANG, JIANGUO**

- Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,650 m p 280 A93-41120  
Minimal hypoxic pulmonary hypertension in normal Tibetans at 3,658 m p 280 A93-41121

**ZHUANG, XIANG-CHANG**

- The responses of cardiovascular during head-up tilt plus lower body negative pressure p 9 A93-11690

**ZHUANG, XIANGCHANG**

- Investigation on requirements for ejection acceleration measuring system p 332 A93-44847

**ZHUKOVSKII, M. A.**

- Evaluation of the efficiency of the pilot's control activity in a flight simulator p 100 A93-18347

**ZIEGLER, W. H.**

- Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684

**ZIELINSKI, IRENE**

- Photo and thermal reactions of ferrous hydroxide p 269 A93-36561

**ZIGANSHIN, R. KH.**

- Vagotropic effects of peptides isolated from the brain of hibernating sustiks p 38 A93-16749

**ZIL'BERMAN, S. TS.**

- The state of the endocrine system of rats of different age under conditions of immobilization stress and biomas administration p 242 A93-35671

**ZIMMERMAN, WAYNE**

- Telerobot control mode performance assessment [AAS PAPER 92-053] p 392 A93-50593

**ZINGER, EDWARD F.**

- Immobilized cell bioreactors for water reclamation - Process stability and effect of reactor design [SAE PAPER 921277] p 301 A93-41446

**ZISSMAN, MARC A.**

- Programmable interactive system for cochlear implant electrode stimulation [AD-A262558] p 333 N93-29421

**ZOGA, T.**

- Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 N93-32256

**ZONGOR, I.**

- The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242

**ZOROVA, O. V.**

- Effect of adaptation to hypoxia on the contractile activity of fast and slow muscles in the rat p 324 A93-43035

**ZUBAL, OREST**

- Effect of protective clothing ensembles on artillery battery crew performance [AD-A254327] p 64 N93-12960

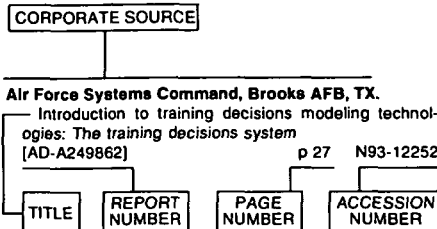
**ZUEV, V. G.**

- Microwaves and the visual analyzer p 250 A93-35247

**ZWILLICH, CLIFFORD W.**

- Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs p 79 A93-20037

## Typical Corporate Source Index Listing



Listings in this index are arranged alphabetically by corporate source. The title of the document is used to provide a brief description of the subject matter. The page number and the accession number are included in each entry to assist the user in locating the abstract in the abstract section. If applicable, a report number is also included as an aid in identifying the document.

## A

### Advanced Aviation Concepts, Jupiter, FL.

- Workshop on Aeronautical Decision Making (ADM).  
Volume 1: Executive summary  
[AD-A257016] p 99 N93-16189  
How expert pilots think: Cognitive processes in expert decision making  
[DOT/FAA/RD-93/9] p 288 N93-27103

### Advisory Group for Aerospace Research and Development, Neuilly-Sur-Seine (France).

- Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine  
[AGARD-CP-518] p 14 N93-11283  
Operational use of contact lenses by military aircrew  
[AGARD-AG-334] p 95 N93-15824  
Human performance assessment methods  
[AGARD-AG-308-ADD] p 133 N93-18868  
Advanced Aircraft Interfaces: The Machine Side of the Man-Machine Interface  
[AGARD-CP-521] p 144 N93-19757  
Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies  
[AGARD-CP-520] p 317 N93-28850  
Nutrition, Metabolic Disorders and Lifestyle of Aircrew  
[AGARD-CP-533] p 367 N93-32240

### Aeronautical Systems Div., Wright-Patterson AFB, OH.

- KC-135 crew reduction feasibility demonstration simulation study. Volume 3: Test and evaluation  
[AD-A253931] p 30 N93-10713  
Attitude awareness enhancements for the F-16 head-up display  
[AD-A260280] p 236 N93-24168

### Aeroplane and Armament Experimental Establishment, Boscombe Down (England).

- Helicopter night vision goggle testing in the United Kingdom  
p 148 N93-19917

### Aerospace Corp., Los Angeles, CA.

- Advanced satellite workstation: An integrated workstation environment for operational support of satellite system planning and analysis  
p 33 N93-11941

### Aerospace Medical Research Labs., Brooks AFB, TX.

- Viral hepatitis in the US Air Force, 1980 - 1989  
p 15 N93-11287  
Estimates of Human Immunodeficiency Virus (HIV) incidence and trends in the US Air Force  
p 16 N93-11292  
Immunological parameters in current and former US Air Force personnel  
p 16 N93-11295  
Susceptibility in USAF recruits to vaccine preventable diseases  
p 18 N93-11301  
Thermal stress in US Air Force operations  
[AD-A255785] p 51 N93-14027  
Physiological stress from chemical defense clothing and equipment  
[AD-A255786] p 51 N93-14028  
Night vision manual for the flight surgeon  
[AD-A257059] p 104 N93-15710  
Flight director information and pilot performance in instrument approaches  
[AD-A258186] p 131 N93-17857  
The Proceedings of the Hypobaric Decompression Sickness Workshop  
[AD-A257612] p 123 N93-18362  
Pilot Candidate Selection Method (PCSM): What makes it work?  
[AD-A262871] p 340 N93-29481  
Predicting aircrew training performance with psychometric g  
[AD-A264021] p 340 N93-30026

### Aerospace Medical Research Labs., Wright-Patterson AFB, OH.

- Development of a tactile perceived attitude transducer  
[AD-A253724] p 25 N93-11081  
The effect of variable seat back angles on human response to +Gz impact accelerations  
[AD-A250673] p 31 N93-11559  
Hybrid 2 and hybrid 3 dummy neck properties for computer modeling  
[AD-A255544] p 66 N93-13874  
Measurement and evaluation of blast overpressure during F-15A crew station vulnerability assessment test  
[AD-A257152] p 104 N93-16033  
Theory of signal detection and its application to visual target acquisition: A review of the literature  
[AD-A262920] p 288 N93-28307  
Armstrong Laboratory space visual function tester program  
p 284 N93-28739  
Effect of microgravity on several visual functions during STS Shuttle missions: Visual Function Tester-Model 1 (VFT-1)  
p 284 N93-28740  
Effect of microgravity on visual contrast threshold during STS Shuttle missions: Visual Function Tester-Model 2 (VFT-2)  
p 284 N93-28741  
Effect of microgravity on the visual near point: Visual Function Tester-Model 4 (VFT-4)  
p 284 N93-28742  
Cognitive interface considerations for intelligent cockpits  
p 319 N93-28865  
An evaluation of B-1B pilot performance during simulated instrument approaches with and without status information  
[AD-A263874] p 353 N93-29888  
Methods for characterizing the human head for the design of helmets  
[AD-A263875] p 353 N93-29889  
Handedness and motor programming effects of manual control and movement  
[AD-A264022] p 340 N93-30027

### Air Force Human Resources Lab., Brooks AFB, TX.

- Epidemiology of United States Air Force spatial disorientation accidents: 1990-1991  
p 133 N93-19679  
Measuring hearing protection device performance using the metrosonics db-3100 sound level analyzer (dosimeter)  
[AD-A260852] p 265 N93-25787

### Air Force Human Resources Lab., Wright-Patterson AFB, OH.

- A cognitive architecture for human performance process model research  
[AD-A261040] p 258 N93-25815  
Air Force Inst. of Tech., Wright-Patterson AFB, OH.  
Physiological effects of positive pressure ventilation  
[AD-A254809] p 49 N93-12751

- Postoperative hyperbaric oxygen treatment of peripheral nerve damage  
[AD-A255842] p 52 N93-14084  
Dual-task training strategies and aging  
[AD-A258261] p 131 N93-18027  
A study of illness related lost time in transport aircraft crewmembers  
[AD-A258193] p 132 N93-18298  
The effects of iconic presentation on individuals  
[AD-A258785] p 133 N93-18949  
A toposcopic investigation of brain electrical activity induced by motion sickness  
[AD-A259024] p 124 N93-18952  
Retinal modeling: Segmenting motion from spatio-temporal inputs using neural networks  
[AD-A258854] p 125 N93-19369  
Comparative evaluation of a monocular head mounted display device versus a flat screen display device in presenting aircraft maintenance technical data  
[AD-A259684] p 234 N93-23660

### Air Force Medical Center, Lackland AFB, TX.

- Early markers of HIV infection and subclinical disease progression  
p 17 N93-11296  
Neuropsychiatric morbidity in early HIV disease: Implications for military occupational function  
p 18 N93-11299

### Air Force Systems Command, Brooks AFB, TX.

- Introduction to training decisions modeling technologies: The training decisions system  
[AD-A249862] p 27 N93-12252  
Field test of a computer-driven tool to measure psychological characteristics of aircrew  
[AD-A264484] p 341 N93-30425  
Determinants of performance rating accuracy: A field study  
[AD-A264726] p 342 N93-30575  
A preliminary empirical evaluation of virtual reality as an instructional medium for visual-spatial tasks  
p 367 N93-32151  
Nutrition for a typical MAC crew during Desert Storm  
p 368 N93-32245

- The lifestyle and dietary consumption patterns of United States Air Force aviators within air training command at Randolph Air Force Base, Texas  
p 369 N93-32257  
The influence of dietary counseling and cardiac catheterization on lipid profiles in American military aviators  
p 369 N93-32259  
Subjective mood and fatigue of C-141 crew during Desert Storm  
p 370 N93-32264  
C-141 aircrew sleep and fatigue during the Persian Gulf conflict  
p 371 N93-32265  
Digital flight data as a measure of pilot performance associated with fatigue from continuous operations during the Persian Gulf conflict  
p 371 N93-32266

### Air Force Systems Command, Wright-Patterson AFB, OH.

- A tutorial on exit pupils and eye rotation with virtual image optical displays  
[AD-A262399] p 333 N93-29400

### Air Force Wright Research and Development Center, Wright-Patterson AFB, OH.

- Developing virtual cockpits  
p 145 N93-19764

### Air War Coll., Maxwell AFB, AL.

- A paradigm shift in Air Force medicine  
[AD-A258334] p 121 N93-18159

### AIRResearch Mfg. Co., Los Angeles, CA.

- Dust protection for environmental control and life support systems in the lunar environment  
p 315 N93-27979

### Alabama A & M Univ., Normal.

- A proposal to demonstrate production of salad crops in the Space Station Mockup Facility with particular attention to space, energy, and labor constraints  
[NASA-CR-192815] p 209 N93-23169

### Alabama Univ., Huntsville.

- ECLSS medical support activities  
[NASA-CR-184429] p 23 N93-12427  
Establishing laboratory standards for biological flight experiments  
[NASA-CR-184402] p 40 N93-12901  
Methods development for total organic carbon accountability  
[NASA-CR-184438] p 40 N93-12949



Microbiological methods for the water recovery systems test, revision 1.1  
[NASA-CR-184390] p 64 N93-12966

Ground testing of bioconvective variables such as morphological characterizations and mechanisms which regulate macroscopic patterns p 82 N93-17303

Development of a prototype interactive learning system using multi-media technology for mission independent training program p 100 N93-17310

Materials dispersion and biodynamics project research p 207 N93-22651

#### Alaska Univ., Anchorage.

Nifedipine for treatment of high altitude pulmonary edema  
[AD-A256959] p 95 N93-16187

#### Alberta Research Council, Edmonton.

A monitoring and control system for complex man-machine systems: Preliminary design p 70 N93-14951

#### American Inst. of Biological Sciences, Washington, DC.

Possible biomedical applications and limitations of a variable-force centrifuge on the lunar surface: A research tool and an enabling resource p 83 N93-17458

#### Anacapa Sciences, Inc., Fort Rucker, AL.

Operator workload predictions for the revised AH-64A workload prediction model, volume 1  
[AD-A254198] p 30 N93-10261

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[AD-A254983] p 35 N93-12508

An evaluation of crew coordination and performance during a simulated UH-60 helicopter mission  
[AD-A254984] p 35 N93-12509

Operator workload predictions for the revised AH-64A workload prediction model. Volume 2: Appendixes A through H  
[AD-A254939] p 63 N93-12545

Human factors research in aircrew performance and training: 1986-1991  
[AD-A254455] p 63 N93-12609

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[AD-A263458] p 354 N93-30590

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Long-duration isolation and confinement: Human factors issues and research requirements p 100 N93-16808

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[AD-A255525] p 70 N93-14554

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[AD-A257704] p 107 N93-17697

#### Analytics, Inc., Willow Grove, PA.

Ocular attention-sensing interface system  
[NASA-CR-190884] p 65 N93-13450

Application and validation of workload assessment techniques  
[AD-A264575] p 366 N93-32012

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Effects of maglev-spectrum magnetic field exposure on CEM T-lymphoblastoid human cell growth and differentiation  
[DE92-041134] p 96 N93-16552

Primary charge separation in isolated photosystem 2 reaction centers  
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[DE93-006411] p 210 N93-24028

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Thermal control systems for low-temperature heat rejection on a lunar base  
[NASA-CR-191286] p 65 N93-13717

Closed ecological systems: From test tubes to Earth's biosphere p 315 N93-27976

The chronic effects of JP-8 jet fuel exposure on the lungs  
[AD-A264162] p 334 N93-30153

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[DE92-001279] p 6 N93-12482

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[DE92-017673] p 40 N93-13269

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[NASA-CR-190957] p 50 N93-13061

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AFRRRI reports  
[AD-A254581] p 49 N93-12649

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[AD-A257231] p 80 N93-15965

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The relationship between environmental conditions and UH-60 cockpit temperature  
[AD-A255918] p 69 N93-14090

Test and evaluation report of the Physio Control Defibrillator/Monitor, Model LifePak(tm) 6s  
[AD-A255691] p 52 N93-14103

The relationship between computer scoring and safety-pilot grading of flight performance  
[AD-A256245] p 58 N93-14600

Effects of terfenadine and diphenhydramine on brain activity and performance in a UH-60 flight simulator  
[AD-A258012] p 119 N93-17817

Effects of microclimate cooling on physiology and performance while flying the UH-60 helicopter simulator in NBC conditions in a controlled heat environment  
[AD-A258502] p 129 N93-20400

In-flight field-of-view with ANVIS  
[AD-A259905] p 235 N93-23992

Effects on physiology and performance of wearing the aviator NBC ensemble while flying the UH-60 helicopter flight simulator in a controlled heat environment  
[AD-A259909] p 235 N93-23995

Human visual limitations on suprathreshold contrast perception through ANVIS  
[AD-A259970] p 226 N93-24431

An automated method for determining mass properties  
[AD-A259924] p 236 N93-24441

The use of extended wear contact lenses in the aviation environment: An Army-wide study  
[AD-A260938] p 255 N93-26218

Interpupillary and vertex distance effects on field-of-view and acuity with ANVIS  
[AD-A261259] p 268 N93-26265

The use of electrophysiological and cognitive variables in the assessment of degradation during periods of sustained wakefulness  
[AD-A263033] p 283 N93-27923

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[AD-A261259] p 371 N93-32266

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[AD-A263011] p 350 N93-29406

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[AD-A255553] p 53 N93-14556

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[AD-A255224] p 51 N93-13941

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[AD-A261460] p 260 N93-26353

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[AD-A252376] p 14 N93-10796

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[AD-A259410] p 194 N93-21269

Assessing patterns of change in anthropometric dimensions: Secular trends of US Army females, 1946-1988  
[AD-A260869] p 265 N93-25628

Anthropometry of the foot and lower leg of U.S. Army soldiers: Fort Jackson, SC  
[AD-A261405] p 268 N93-26404

The Environmental Symptoms Questionnaire (ESQ): Development and application  
[AD-A264127] p 335 N93-30196

The effects of an antijet lag diet p 370 N93-32263

Effects of caffeine on mental performance and mood: Implications for aircrew members p 372 N93-32269

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[AD-A254328] p 23 N93-12145

Effect of protective clothing ensembles on artillery battery crew performance  
[AD-A254327] p 64 N93-12960

Validation of two temperature pill telemetry systems in humans during moderate and strenuous exercise  
[AD-A259068] p 124 N93-19072

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[AD-A258744] p 128 N93-20384

Sustaining health and performance in the cold: A pocket guide to environmental medicine aspects of cold-weather operations  
[AD-A259625] p 218 N93-24021

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[AD-A262926] p 320 N93-28884

Medical aspects of cold weather operations: A handbook for medical officers  
[AD-A263559] p 336 N93-30588

Field trial of caffeine on physical performance at altitude: An attempt to overcome the challenge  
[AD-A264260] p 337 N93-30894

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[AD-A265497] p 360 N93-31917

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[AD-A263191] p 142 N93-19666

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[DE93-609131] p 338 N93-31225

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Selection of personnel for stressful occupations: The potential utility of psychophysiological measures as selection tools  
[AD-A264571] p 363 N93-32011

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[AD-A253393] p 30 N93-10217

Evaluation of an electronics system concept for Respiratory Protection system (RESPO 21)  
[AD-A253394] p 30 N93-10288

Evaluation of multilayer mask concept for RESPO 21  
[AD-A253392] p 33 N93-12079

Human factors design principles for instrument approach procedure charts. Volume 1: Readability  
[AD-A257234] p 104 N93-15968

#### Bechtel National, Inc., San Francisco, CA.

Oxygen production on the Lunar materials processing frontier p 315 N93-27967

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Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF) p 21 N93-11316

Biological parameters and cardiovascular risk factors with the flying personnel of the Belgian Armed Forces p 370 N93-32260

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Development of a pyrolysis waste recovery model with designs, test plans, and applications for space-based habitats p 267 N93-26076

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An improved anthropometric test device p 143 N93-19670

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[NASA-TM-107557] p 139 N93-18111

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[NASA-CR-190879] p 42 N93-13612

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[AD-A256327] p 54 N93-15192  
Transcutaneous analyte measuring methods  
[AD-A262861] p 333 N93-29509
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Lunar base thermal management/power system analysis and design  
p 315 N93-27985
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[DE92-017863] p 43 N93-15211
- Boston Univ., MA.**  
Visual perception of structure from motion  
[AD-A253235] p 26 N93-11503  
The cognitive, perceptual, and neural bases of skilled performance  
[AD-A258236] p 130 N93-17820
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Aircrew acceptance of automation in the cockpit  
p 144 N93-19761
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p 147 N93-19779
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p 319 N93-28862
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p 320 N93-28866
- British Columbia Univ., Vancouver.**  
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p 158 N93-21098
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[DE92-015847] p 5 N93-10461  
The potential effects of concurrent increases in temperature, CO<sub>2</sub> and O<sub>3</sub> on net photosynthesis, as mediated by rubisCO  
[DE92-019411] p 5 N93-11630  
The effects of prolonged growth in elevated CO<sub>2</sub> concentrations in the field on the amounts of different leaf proteins  
[DE93-002940] p 115 N93-19751  
Improved inhalation technology for setting safe exposure levels for workplace chemicals  
p 174 N93-22164
- Brown Univ., Providence, RI.**  
Theory of synaptic plasticity in visual cortex  
[AD-A260052] p 224 N93-23960  
Theory of synaptic plasticity in visual cortex  
[AD-A260322] p 219 N93-24238  
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[NASA-CR-193040] p 222 N93-24763  
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[NASA-CR-193041] p 282 N93-27102  
Growth factor involvement in tension-induced skeletal muscle growth  
[NASA-CR-193023] p 282 N93-27113
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Spatio-temporal masking: Hyperacuity and local adaptation  
[AD-A257934] p 121 N93-18006  
Micromotional studies of utricular and canal afferents  
[NASA-CR-192703] p 207 N93-22800  
Computer based analysis and synthesis of retinal function  
[AD-A260514] p 221 N93-24420
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Mathematics and biology: The interface, challenges and opportunities  
[DE92-041207] p 82 N93-17359
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Classification of complex sounds  
[AD-A258405] p 122 N93-18223  
Analysis of neural systems involved in modulation of memory storage  
[AD-A262418] p 283 N93-27654
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Applications of living systems theory to life in space  
p 105 N93-16865
- California Univ., San Diego, La Jolla.**  
Extrathalamic modulation of cortical function  
[AD-A255440] p 53 N93-14782  
Neural basis of motion perception  
[AD-A261452] p 260 N93-26349
- Comparative analytical study of evoked and event related potentials as correlates of cognitive processes  
[AD-A261388] p 261 N93-26446  
Wound healing and connective tissue metabolism: The role of hyperbaric oxygen therapy  
[AD-A262483] p 285 N93-28759
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Vaccination against Hepatitis B: The Italian strategy  
p 15 N93-11289
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p 158 N93-21074  
Cerebral autoregulation in microgravity  
p 173 N93-21112
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Connectionist models and linguistic theory: Investigations of stress systems in language  
[AD-A265450] p 364 N93-32064
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[NASA-CR-191123] p 246 N93-27085
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[AD-A254381] p 64 N93-12860  
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[AD-A264415] p 358 N93-32035
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p 134 N93-19682
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p 368 N93-32244
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p 237 N93-24405
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p 371 N93-32267
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p 362 N93-32253  
Survey of smoking habits in the Spanish Air Force  
p 370 N93-32262
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Silicon neuron  
[AD-A255091] p 50 N93-12756
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Evaluation of test methods and requirements for respiratory protection systems 21  
[AD-A262466] p 317 N93-28757  
Evaluation and optimization of a flexible filtration system for respiratory protection system 21  
[AD-A262467] p 284 N93-28758
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Contribution of personality to the prediction of success in initial air traffic control specialist training  
[DOT/FAA/AM-93/4] p 259 N93-26138  
Variations of time-to-incapacitation and carboxyhemoglobin values in rats exposed to two carbon monoxide concentrations  
[DOT/FAA/AM-93/7] p 274 N93-27152  
Variations in time-to-incapacitation and blood cyanide values for rats exposed to two hydrogen cyanide gas concentrations  
[DOT/FAA/AM-93/8] p 283 N93-27158  
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[DOT/FAA/AM-93/9] p 288 N93-28622
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[CAP-601] p 363 N93-31729
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p 81 N93-16806  
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Earth to lunar CELSS evolution  
p 351 N93-29727
- Colorado Univ., Denver.**  
Beta-adrenergic blockade and lactate metabolism during exercise at high altitude  
[AD-A263544] p 334 N93-29820
- Columbia Univ., New York, NY.**  
Radiation physics, biophysics, and radiation biology  
[DE92-013673] p 6 N93-12266  
Decision paths in complex tasks  
[NASA-CR-192121] p 132 N93-18359  
Visual perception of elevation  
[AD-A261394] p 259 N93-26307
- Connecticut Univ., Storrs.**  
Auditory perception  
[AD-A255061] p 23 N93-12469
- Construcciones Aeronauticas S.A., Madrid (Spain).**  
Tobacco and health of the pilot  
[ETN-93-93693] p 217 N93-23414
- Construction Technology Labs., Skokie, IL.**  
Concrete lunar base investigation  
p 107 N93-17445
- Cornell Univ., Ithaca, NY.**  
Center of Excellence in Biotechnology (Research)  
[AD-A263598] p 330 N93-29915
- Corvallis Environmental Research Lab., OR.**  
Anatomy and physiology of plant conductive systems  
[PB93-156032] p 245 N93-25877
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Cellular and tissue injury during nonfreezing cold injury and frostbite  
[AD-A260574] p 254 N93-25900
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[AD-A253295] p 14 N93-11193

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How do zooplankton feed? A critical microgravity experiment  
p 158 N93-21097  
Neurophysiological analysis of circadian rhythm entrainment  
[AD-A264681] p 361 N93-32018
- Danish Aerospace Medical Center of Research, Copenhagen.**  
Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 N93-24382
- Dartmouth Coll., Hanover, NH.**  
Multimodal interactions in sensory-motor processing  
[AD-A255780] p 59 N93-15067
- Dassault-Breguet Aviation, Saint Cloud (France).**  
Flight above a virtual world  
p 145 N93-19766
- Dayton Univ., OH.**  
Perceptual dimensions of visual scenes relevant for simulating low-altitude flight  
[AD-A254645] p 57 N93-12662  
Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks  
[AD-A257111] p 100 N93-17684  
Automatic information processing and high performance skills  
[AD-A258473] p 132 N93-18273  
Night vision goggle training: Development and production of six video programs  
[AD-A258529] p 148 N93-20050  
Quantification of human responses  
p 340 N93-29564  
Effects of area-of-interest display characteristics of visual search performance and head movements in simulated low-level flight  
[AD-A264661] p 341 N93-30542
- Dayton Univ. Research Inst., OH.**  
Helmet-mounted area-of-interest display  
[AD-A258275] p 139 N93-18029  
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[AD-A264069] p 353 N93-29924
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[DCIEM-92-20] p 209 N93-23343

Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates [AD-A262762] p 285 N93-28939

Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits [AD-A262862] p 350 N93-29471

**Defence and Civil Inst. of Environmental Medicine, North York (Ontario).**

Mechanisms of immune failure in burn injury p 15 N93-11285

Asthma in aircrew: Assessment, treatment and disposition p 21 N93-11315

Principles for integrating voice I/O in a complex interface p 146 N93-19774

**Defence Research Agency, Bedford (England).**

The design and development of the new RAF standard HUD format p 318 N93-28856

**Defence Research Agency, Farnborough (England).**

The quest for an integrated flying helmet p 319 N93-28860

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Explosives search dogs p 159 N93-21933

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AFTERRISE: Deep body temperature following exercise [AD-A259887] p 218 N93-23984

**Defence Advanced Research Projects Agency, Arlington, VA.**

From pilot's associate to satellite controller's associate p 32 N93-11922

**Defence Technical Information Center, San Diego, CA.**

Directory of design support methods [AD-A256987] p 104 N93-16258

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A new concept for helmet mounted vision p 145 N93-19767

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Proceedings of a Workshop on Molecular Nuclear Medicine [DE93-010828] p 285 N93-28835

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TALON and CRADLE: Systems for the rescue of tumbling spacecraft and astronauts p 196 N93-22268

**Department of the Army, Washington, DC.**

Improved head support stand adjustable by compound turnbuckle [AD-D015384] p 55 N93-15249

**Department of the Navy, Washington, DC.**

Helmet visor support apparatus p 351 N93-29606

Goggles emergency release apparatus [AD-D015685] p 351 N93-29607

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The design and use of automotive crash test dummies p 142 N93-19669

**Design Science, Los Angeles, CA.**

Lunar subsurface architecture enhanced by artificial biosphere concepts p 107 N93-17448

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Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m [DLR-FB-92-14] p 219 N93-24093

Mir 1992 operations and crew training p 226 N93-24352

Life in and from space p 237 N93-24373

Cardiovascular stress test with non-invasive techniques p 221 N93-24399

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Stress resistance as a diagnostic category in air traffic controller selection [DLR-FB-92-13] p 219 N93-24092

International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection [DLR-FB-92-12] p 225 N93-24104

Computer-generated parallel tests for aptitude measurement in the selection of aviation operators [DLR-FB-92-29] p 343 N93-31229

Background and objectives of the PARAT program p 343 N93-31230

Phases of the project development and examination methodologies p 343 N93-31231

The position test: A computer generated process for acquisition of inductive logic thinking p 343 N93-31232

The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 N93-31233

The clearance test: A computer generated process for acquisition of auditory short term sensitivity p 343 N93-31234

The concentration loading test system: A computer generated process for acquisition of attentiveness control p 344 N93-31235

The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 N93-31236

The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 N93-31237

The PARAT tests as examination system p 344 N93-31238

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Columbus payload requirements in human physiology p 220 N93-24386

**Divisione Aerea Studi Ricerche e Sperimentazioni, Pratica di Mare (Italy).**

Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303

Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305

The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312

**DOMPE S.p.A., L'Aquila (Italy).**

Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171 p 20 N93-11309

**Domier Luftfahrt G.m.b.H., Friedrichshafen (Germany).**

Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857

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Development of novel models for describing multiple toxicity effects [AD-A264439] p 336 N93-30422

**Duke Univ., Durham, NC.**

Retinal information processing for minimum laser lesion detection and cumulative damage [AD-A259195] p 171 N93-20563

Primary events in olfactory reception [AD-A260562] p 255 N93-25944

**Dynamics Research Corp., Wilmington, MA.**

Development of the Personnel-based System Evaluation Aid (PER-SEVAL) performance shaping functions [AD-A252820] p 26 N93-11779

Development of measures of crew coordination [AD-A255384] p 70 N93-14651

Attention factors associated with head-up display and helmet-mounted display systems [AD-A260204] p 235 N93-24001

## E

**East Carolina Univ., Greenville, NC.**

Evaluation of dried storage of platelets for transfusion: Physiologic integrity and hemostatic functionality [AD-A263240] p 334 N93-29620

**ECC International Corp., Orlando, FL.**

Training high performance skills using above real-time training [NASA-CR-192616] p 225 N93-24192

**Edgerton, Germeshausen and Grier, Inc., Idaho Falls, ID.**

Crucial role of detailed function, task, timeline, link, and human vulnerability analyses in HRA [DE93-001923] p 321 N93-28942

**Educational Testing Service, Princeton, NJ.**

A psychometrically sound cognitive diagnostic model: Effect of remediation as empirical validity [AD-A255926] p 52 N93-14109

**Eidgenossische Technische Hochschule, Zurich (Switzerland).**

Space flight and immune system p 14 N93-11284

**Elektronik-System G.m.b.H., Munich (Germany).**

CVA, cockpit design and development tool p 147 N93-19780

**Elliott-Automation Space and Advanced Military Systems Ltd., Camberley (England).**

Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853

**Energetics, Inc., Columbia, MD.**

Potential human health effects associated with power frequency electric and magnetic fields [PB93-132678] p 221 N93-24590

**Ergonomic Engineering Associates, Pelham, MA.**

Adaptation to transient postural perturbations [NASA-CR-190959] p 105 N93-16699

**Eurocopter Deutschland G.m.b.H., Munich (Germany).**

Equipment, more or less ready to be used in helicopters p 148 N93-19785

**European Space Agency, Cologne (Germany).**

Selection of astronauts for European space missions p 225 N93-24345

The European astronauts training programme p 226 N93-24346

**European Space Agency, Paris (France).**

Photobiological investigations on spores of streptomycetes griseus [ESA-TT-1269] p 277 N93-29274

**EXOS, Inc., Burlington, MA.**

Prevention of cumulative trauma disorders [PB93-188332] p 338 N93-31138

**Eye and Ear Hospital, Pittsburgh, PA.**

Neural processing of gravity information [NASA-CR-192766] p 209 N93-23233

## F

**Federal Aviation Administration, Oklahoma City, OK.**

Survey of aviation medical examiners: Information and attitudes about the pre-employment and pre-appointment drug testing program [DOT/FAA/AM-92/15] p 218 N93-24088

Organizational politics, participation in decision-making, and job satisfaction [DOT/FAA/AM-92/17] p 257 N93-25203

A longitudinal examination of applicants to the air traffic control supervisory identification and development program [DOT/FAA/AM-92/16] p 257 N93-25213

The prevalence of artificial lens implants in the civil airman population [DOT/FAA/AM-92/14] p 253 N93-25214

**Federal Aviation Administration, Washington, DC.**

A new test of scanning and monitoring ability: Methods and initial results [AD-A249123] p 24 N93-10321

Comparisons of molecular sieve oxygen concentrators for potential medical use aboard commercial aircraft [AD-A253648] p 31 N93-11279

The identification and quantitation of triamterene in blood and urine from a fatal aircraft accident [AD-A254550] p 49 N93-12612

Enhancement of drug detection and identification by use of various derivatizing reagents on GC-FTIR analysis [AD-A255582] p 95 N93-16041

Validity of clinical color vision tests for air traffic control specialists [AD-A258219] p 123 N93-18301

Guide for aviation medical examiners [PB92-219690] p 172 N93-21047

Index of international publications in aerospace medicine [AD-A262908] p 284 N93-28306

**Federal Aviation Agency, Oklahoma City, OK.**

Comparison of portable crewmember protective breathing equipment (CPBE) designs [DOT/FAA/AM-93/6] p 310 N93-27121

**Federal Coordinating Council for Science, Engineering and Technology, Washington, DC.**

Prologue to Action. Life Sciences Education and Science Literacy [PB93-107514] p 159 N93-21230

**Florida Inst. of Tech., Melbourne.**

Studies of a laser/nuclear thermal hardened body armor [AD-A255128] p 34 N93-12423

Rapid susceptibility testing of mycobacterium avium complex and mycobacterium tuberculosis isolated from AIDS patients [NASA-CR-192382] p 172 N93-20736

**Florida Sea Grant Coll., Gainesville.**

The production and use of aeroponically grown inocula of VAM fungi in the native plant nursery [PB92-204973] p 43 N93-15208

**Florida Univ., Gainesville.**

Design of biomass management systems and components for closed loop life support systems p 351 N93-29728

**Future Systems Consultants, Los Angeles, CA.**

Vertical regolith shield wall construction for lunar base applications p 107 N93-17446

## G

**Galaxy Scientific Corp., Atlanta, GA.**

Human Factors Issues in Aircraft Maintenance and Inspection. Science, technology, and management: A program review [PB93-146975] p 234 N93-23647

**Galaxy Scientific Corp., Pleasantville, NJ.**

Human Factors in Aviation Maintenance, phase 2 [DOT/FAA/AM-93/5] p 267 N93-26089

**General Dynamics Corp., Fort Worth, TX.**

Head-steered sensor flight test results and implications p 318 N93-28859

**General Dynamics Corp., San Diego, CA.**

Candidate technologies for the Integrated Health Management Program  
[NASA-CR-192520] p 217 N93-22655

**General Electric Co., Gilbert, AZ.**

Low-cost helmet-mounted displays  
[AD-A262616] p 317 N93-28479

**General Electric Co., Houston, TX.**

Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069  
Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070

Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071  
Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080

Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081  
Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 N93-23082

MAC to VAX connectivity: Heart rate spectral analysis system p 254 N93-25594  
Space Station Freedom biomedical monitoring and countermeasures: Biomedical facility hardware catalog [NASA-CR-193156] p 246 N93-26700

**General Electric Co., Huntsville, AL.**

Gravitational Biology Facility on Space Station: Meeting the needs of space biology p 206 N93-22625

**General Engineering and Systems Analysis Co., Inc., Kearneysville, WV.**

Microcomputer based software for biodynamic simulation p 196 N93-22191

**George Mason Univ., Fairfax, VA.**

Evaluation and estimation of handling qualities via statistical modeling of pilot response data [AD-A255324] p 69 N93-14548

**George Washington Univ., Washington, DC.**

Publications of the Space Physiology and Countermeasures Program; Neuroscience Discipline: 1980-1990 p 55 N93-15583  
Publications of the Space Physiology and Countermeasures Program. Cardiopulmonary Discipline: 1980-1990 [NASA-CR-4476] p 123 N93-18376

**Georgetown Univ., Washington, DC.**

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of *S. typhi* as a new live oral typhoid fever vaccine candidate p 19 N93-11306  
Epidemiologic view of allergic diseases in North America: Implications for aerospace medicine p 20 N93-11311

**Georgia Inst. of Tech., Atlanta.**

Automatic information processing and high performance skills: Individual differences and mechanisms of performance improvement in search-detection and complex tasks [AD-A257711] p 100 N93-17684  
Cognitive engineering models in space systems [NASA-CR-192001] p 141 N93-18517

Acquisition and production of skilled behavior in dynamic decision-making tasks [NASA-CR-192361] p 181 N93-20908

**Georgia State Univ., Atlanta.**

Neurochemical control of circadian rhythms [AD-A255054] p 50 N93-13116

**Georgia Univ., Athens.**

Nitrogen control of chloroplast development and differentiation [DE92-017392] p 39 N93-12768

Expertise, text coherence, and constraint satisfaction: Effects on harmony and settling rate [AD-A262703] p 288 N93-28901

**German Air Force, Fuerstenfeldbruck (Germany).**

Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 N93-19683

Toxicological investigations of flight accidents: Findings and methods p 126 N93-19695  
27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 N93-19696

Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 N93-19697

Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces p 363 N93-32254

**Good Samaritan Hospital and Medical Center, Portland, OR.**

Role of orientation reference selection in motion sickness [NASA-CR-191912] p 124 N93-18596

Torsional vestibulo-ocular reflex measurements for identifying otolith asymmetries possibly related to space motion sickness susceptibility [NASA-CR-193304] p 363 N93-32364

**Gordon Research Conferences, Inc., Kingston, RI.**

The Gordon Research Conference on Pineal Cell Biology [AD-A264840] p 337 N93-30904

**Guelph Univ. (Ontario).**

Fuzzy neural network methodology applied to medical diagnosis p 334 N93-29546

Gulhane Skeri Tip Akademisi, Eskisehir (Turkey). Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 N93-19660  
Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 N93-19709  
Effectiveness of birthdate biorhythm theory on flight accidents p 127 N93-19710

**H****H. W. Structures Ltd., Pitsea (England).**

Occupant kinematics simulation of the Kegworth air accident p 142 N93-19662

**Hahnemann Medical Coll. and Hospital, Philadelphia, PA.**

The role of central monoaminergic systems in arousal and selective attention [AD-A258500] p 122 N93-18264

**Hamilton Standard, Windsor Locks, CT.**

Evolution of Space Station EMU PLSS technology recommendations p 312 N93-27790

**Hamilton Standard Div., United Aircraft Corp., Windsor Locks, CT.**

Submarine Advanced Integrated Life Support system (SAILS) program [AD-A253564] p 32 N93-11812

**Harvard School of Public Health, Boston, MA.**

Analysis of disease progression from clinical observations of US Air Force active duty members infected with the Human Immunodeficiency Virus: Distribution of AIDS survival time from interval censored observations p 17 N93-11297

**Harvard Univ., Cambridge, MA.**

The effects of luminance boundaries on color perception [AD-A250705] p 22 N93-11841

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191618] p 110 N93-15825

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-191807] p 110 N93-16709

Neuropsychological components of object identification [AD-A261449] p 259 N93-26347

Wide-bandwidth high-resolution search for extraterrestrial intelligence [NASA-CR-193137] p 322 N93-28895

Intermediate levels of visual processing [AD-A264117] p 335 N93-30192

**Hawaii Univ., Honolulu.**

Space migrations: Anthropology and the humanization of space p 105 N93-16862

**Health and Welfare Canada, Ottawa (Ontario).**

The development of an automated cell culture system for use in space life science research p 158 N93-21085

**Health Effects Research Lab., Research Triangle Park, NC.**

Measurement of behavioral thermoregulation [PB92-217033] p 172 N93-21046

**Hecht-Nielsen Neurocomputer Corp., Inc., San Diego, CA.**

Neural network retinal model real time implementation [AD-A255652] p 52 N93-14210

**Hellenic Air Force Aeromedical Center, Athens (Greece).**

Lipidemic profile of Hellenic Airforce officers p 362 N93-32250

**Hellenic Air Force General Hospital, Athens (Greece).**

Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317

Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318

Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 N93-19698

Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 N93-32256

**Hickling (James F.) Management Consultants Ltd., Ottawa (Ontario).**

The air traffic controller's mental model and its implications for equipment design and trainee selection p 341 N93-30322

**Hilton Systems, Inc., Cherry Hill, NJ.**

Age 60 Project: Consolidated database experiments [HS-TR-8025-3C(R2)] p 314 N93-27851

**Hopital Ambroise Pare, Boulogne-Billancourt (France).**

The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 N93-19705

**Hopital d'Instruction des Armees, Paris (France).**

Immunization of personnel traveling to a destination in tropical countries: French position p 19 N93-11304

**Horizon Aerospace, Houston, TX.**

Space Biology Initiative. Trade Studies, volume 1 [NASA-CR-190989] p 207 N93-23068

Space biology initiative program definition review. Trade study 5: Modification of existing hardware (COTS) versus new hardware build cost analysis p 207 N93-23069

Space biology initiative program definition review. Trade study 1: Automation costs versus crew utilization p 208 N93-23070

Space biology initiative program definition review. Trade study 4: Design modularity and commonality p 208 N93-23071

Space Biology Initiative. Trade Studies, volume 2 [NASA-CR-190990] p 208 N93-23079

Space biology initiative program definition review. Trade study 3: Hardware miniaturization versus cost p 208 N93-23080

Space biology initiative program definition review. Trade study 6: Space Station Freedom/spacelab modules compatibility [EEI-89-236] p 209 N93-23081

Space biology initiative program definition review. Trade study 2: Prototype utilization in the development of space biology hardware p 209 N93-23082

**Houston Univ., TX.**

Metabolic response of environmentally isolated microorganisms to industrial effluents: Use of a newly described cell culture assay p 245 N93-26066

The adult literacy evaluator: An intelligent computer-aided training system for diagnosing adult illiterates p 258 N93-26082

**Human Engineering Labs., Aberdeen Proving Ground, MD.**

System for generating dynamic video imagery for human factors research [AD-A24675] p 31 N93-11743

Effects of spatial luminance nonuniformities on visual-task performance and subjective uniformity [AD-A255989] p 58 N93-14416

Gloved operator performance study [AD-A256894] p 104 N93-16048

**Hunter Coll., New York, NY.**

Gene transcription and electromagnetic fields [DE93-010854] p 276 N93-28848

**HydroQual, Inc., Mahwah, NJ.**

Ultraviolet disinfection technology assessment [PB92-222868] p 64 N93-12983

**Idaho Univ., Moscow.**

Exercise/recreation facility for a lunar or Mars analog p 352 N93-29733

**IIT Research Inst., Chicago, IL.**

Engineman stress and fatigue: Pilot tests [PB93-175008] p 351 N93-29675

**Indiana Univ., Bloomington.**

Institute for the Study of Human Capabilities [AD-A256091] p 69 N93-14427

Nerves and tissue repair [AD-A255299] p 53 N93-14535

**Inhalation Toxicology Research Inst., Albuquerque, NM.**

Understanding mechanisms of carcinogenesis using rat tracheal epithelial cells in vitro [DE92-013510] p 13 N93-10626

**Innsbruck Univ. (Austria).**

Eye-head-arm coordination and spinal reflexes in weightlessness p 236 N93-24362

**Institute for Defense Analyses, Alexandria, VA.**

Relating flying hours to aircrew performance: Evidence for attack and transport missions [AD-A253988] p 25 N93-10719

The effects of wearing protective chemical warfare combat clothing on human performance [AD-A250716] p 35 N93-12491

**Institute for Perception RVO-TNO, Soesterberg (Netherlands).**

- A spurious pop-out in visual search  
[AD-A256548] p 57 N93-14267
- Decision making in a dynamic task environment: The effect of time pressure  
[AD-A256557] p 58 N93-14602
- High-resolution contrast control on a video display: Method and calibration  
[AD-A256552] p 60 N93-15400

**Institute of Aviation Medicine, Oslo (Norway).**

- The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)?  
p 143 N93-19704
- Changes in food and energy intake in military aircrew  
p 368 N93-32246

**Institute of Biomedical Problems, Moscow (USSR).**

- Physiological experiments within the project AustroMir  
p 219 N93-24354

**Institute of Ecotechnics, London (England).**

- Life systems for a lunar base p 66 N93-13992

**Institute of Sound and Vibration Research, Southampton (England).**

- Design guide for the ergonomic aspects of helicopter crew seating  
[ISVR-TR-209] p 65 N93-13464
- Transmission of vibration through the human body to the head: A summary of experimental data  
[ISVR-TR-218] p 361 N93-32237

**Instituto de Pesquisas Energeticas e Nucleares, Sao Paulo (Brazil).**

- Utilization of high energy electron beam in the treatment of drinking and waste water  
[DE92-642335] p 372 N93-32406

**Integrated Space Systems Corp., Collegeville, PA.**

- Evolving concepts of lunar architecture: The potential of subsele development p 107 N93-17447

**International Atomic Energy Agency, Vienna (Austria).**

- Format and structure of a database on health and environmental impacts of different energy systems for electricity generation  
[DE92-634160] p 12 N93-10222

**International Centre for Theoretical Physics, Trieste (Italy).**

- Spontaneous regulating mechanisms that may have led to the origin of life  
[DE93-603677] p 331 N93-31161

**Iowa State Univ. of Science and Technology, Ames.**

- Space life support engineering program  
[NASA-CR-192168] p 141 N93-19039

**Iowa Univ., Iowa City.**

- Meta-analysis of integrity tests: A critical examination of validity generalization and moderator variables  
[AD-A254681] p 27 N93-12225

- Molecular biology of anaerobic aromatic biodegradation  
[AD-A255213] p 42 N93-13863

**Ishikawajima-Harima Heavy Industries Co. Ltd., Tokyo (Japan).**

- Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover  
p 316 N93-28032

- Lunar surface experiment system p 316 N93-28034

**Istituto Superiore di Sanita, Rome (Italy).**

- HIV variability and perspectives of a vaccine  
p 16 N93-11294

**Italian Air Force Pratica di Mare, Rome.**

- Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school  
p 368 N93-32248
- Cardiovascular risk factors in an Italian Air Force population: Preliminary report p 362 N93-32252

**J****Jackson (Henry M.) Foundation, Washington, DC.**

- Relating cognitive function to military aviator performance in early HIV infection p 17 N93-11298

**Jasper (Louis J., Jr), Fulton, MD.**

- Variable-Volume Flushing (V-VF) device for water conservation in toilets p 195 N93-22167

**Jefferson Medical Coll., Philadelphia, PA.**

- A core facility for the study of neurotoxins of biological origin  
[AD-A254359] p 50 N93-12945

**Jet Propulsion Lab., California Inst. of Tech., Pasadena.**

- Caenorhabditis elegans - A model system for space biology studies p 80 A93-20665
- Fusing human and machine skills for remote robotic operations p 137 A93-24994
- Image enhancement filters significantly improve reading performance for low vision observers p 167 A93-28723

- Wall shear stress estimates in coronary artery constrictions p 170 A93-28759

- An operator interface design for a telerobotic inspection system

- [AIAA PAPER 93-1160] p 231 A93-31034

- A teleoperation training simulator with visual and kinesthetic force virtual reality p 233 A93-33448

- NASA's telerobotics research program p 263 A93-35566

- Overview of NASA's 1991 Life Support Systems Analysis Workshop

- [SAE PAPER 921118] p 290 A93-41310

- Human life support during interplanetary travel and domicile. V - Mars expedition technology trade study for solid waste management

- [SAE PAPER 921119] p 290 A93-41311

- Human life support during interplanetary travel and domicile. VI - Generic modular flow schematic for hybrid physical/chemical-biological life support systems

- [SAE PAPER 921120] p 290 A93-41312

- Kinematics and control of a fully parallel force-reflecting hand controller for manipulator teleoperation

- p 364 A93-45598

- Operator performance with alternative manual control modes in teleoperation p 390 A93-49397

- Interactive and cooperative sensing and control for advanced teleoperation p 391 A93-49443

- A procedure for the frequency analysis of telerobotic tasks data p 392 A93-50513

- Ground-remote control for space station telerobotics with time delay p 392 A93-50592

- [AAS PAPER 92-052] p 392 A93-50593

- [AAS PAPER 92-053] p 392 A93-50593

- Intelligent sensing and control for advanced teleoperation p 409 A93-54158

- Integrated tools for teleoperated satellite repair p 409 A93-54845

- Remote surface inspection system p 410 A93-55469

- Pseudomonas screening assay [NASA-CASE-NPO-17653-1-CU] p 245 N93-25994

- Man-machine cooperation in advanced teleoperation p 366 N93-32106

- Interactive and cooperative sensing and control for advanced teleoperation p 366 N93-32108

**Johns Hopkins Univ., Laurel, MD.**

- Automated system for analyzing the activity of individual neurons p 173 N93-22163

- Automated system for early breast cancer detection in mammograms p 253 N93-25568

- The design of mechanically compatible fasteners for human mandible reconstruction p 253 N93-25569

- Automatic detection of seizures with applications p 254 N93-25592

**Joint Publications Research Service, Arlington, VA.**

- JPRS report: Science and technology. Central Eurasia: Life sciences

- [JPRS-ULS-92-024] p 40 N93-13033

- JPRS report: Science and technology. Central Eurasia: Life sciences

- [JPRS-ULS-92-025] p 244 N93-25405

- JPRS report: Science and technology. Central Eurasia: Life sciences

- [JPRS-ULS-92-020] p 244 N93-25406

- JPRS report: Science and technology. Central Eurasia: Life sciences

- [JPRS-ULS-92-022] p 253 N93-25407

- JPRS report: Science and technology. Central Eurasia: Life sciences

- [JPRS-ULS-93-005] p 276 N93-28683

- JPRS report: Science and technology. Central Eurasia: Life sciences

- [JPRS-ULS-92-027] p 276 N93-28684

**K****Kansas State Univ., Manhattan.**

- Automation of closed environments in space for human comfort and safety

- [NASA-CR-192045] p 138 N93-17971

- Automation of closed environments in space for human comfort and safety p 352 N93-29734

**Kawasaki Heavy Industries Ltd., Kobe (Japan).**

- Manned lunar surface site p 316 N93-28033

**Keller Army Community Hospital, West Point, NY.**

- A prospective evaluation of stress fractures/overuse injuries in a population of West Point cadets

- [AD-A252427] p 13 N93-10709

**Kent State Univ., OH.**

- Study of SCN neurochemistry using in vivo microdialysis in the conscious brain: Correlation with circadian activity rhythms

- [AD-A259803] p 217 N93-23459

**Krug International, Houston, TX.**

- A health care system for the Space Station [NASA-TM-108093] p 65 N93-13571

**Krug Life Sciences, Inc., San Antonio, TX.**

- Complement proteins and decompression sickness susceptibility

- [AD-A254448] p 50 N93-12905

- Utility of a ghost horizon and climb/diver ladder line tapering on a head-up display

- [AD-A264401] p 353 N93-30167

- Acquisition of physiological data during G-induced Loss of Consciousness (G-LOC)

- [AD-A264492] p 335 N93-30400

**L****Laboratoire de Medecine Aerospatiale, Bretigny-sur-Orge (France).**

- Fires on board aircraft: Toxicological risk in flight p 126 N93-19694

**Lawrence Livermore National Lab., CA.**

- Molecular cytogenetics: A novel approach for measuring chromosome translocations in individuals years after exposure to low levels of ionizing radiation

- [DE92-018066] p 5 N93-10974

**Lehigh Univ., Bethlehem, PA.**

- Electrically modifiable nonvolatile SONOS synapses for electronic neural networks

- [AD-A258318] p 122 N93-18252

**Lernout and Hauspie Speech Products N.V., Ypres (Belgium).**

- The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft p 146 N93-19772

**Letterman Army Inst. of Research, San Francisco, CA.**

- Systemic and pulmonary hypertension after resuscitation with cell-free hemoglobin

- [AD-A258185] p 120 N93-17900

**Life Systems, Inc., Cleveland, OH.**

- Integrated oxygen recovery system [NASA-CR-192343] p 234 N93-22663

- Integrated oxygen recovery system [NASA-CR-192982] p 267 N93-26088

**Little (Arthur D.), Inc., Cambridge, MA.**

- Hybrid oxygen system [AD-A262417] p 317 N93-28464

**Liton Systems (Canada) Ltd., Rexdale (Ontario).**

- The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential

- p 148 N93-19782

**Lockheed Engineering and Sciences Co., Houston, TX.**

- Astronaut candidate strength measurement using the Cybex 2 and the LIDO Multi-Joint 2 dynamometers

- [NASA-CR-185679] p 34 N93-12195

- Methodology issues concerning the accuracy of kinematic data collection and analysis using the ariel performance analysis system

- [NASA-CR-185689] p 34 N93-12211

- Occupational ergonomics in space p 68 N93-14013

- Assessment of the state of the art in life support environmental control for SEI p 315 N93-27978

**Lockheed Engineering and Sciences Co., Washington, DC.**

- Digest of Russian Space Life Sciences, issue 33 [NASA-CR-3922(39)] p 244 N93-25195

**Lockheed Missiles and Space Co., Sunnyvale, CA.**

- Space life support technology applications to terrestrial environmental problems p 265 N93-25617

- Simplified Aid For Crew Rescue (SAFR) p 313 N93-27793

**London Univ. (England).**

- Autoradiographic distribution and applied pharmacological characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs

- [AD-A255607] p 54 N93-15009

**Los Alamos National Lab., NM.**

- Self-programming of matter and the evolution of proto-biological organizations

- [DE92-015244] p 5 N93-10628

- Functional MRI studies of human vision on a clinical imager

- [DE92-017448] p 49 N93-12566

- A weighted iterative algorithm for neuromagnetic imaging

- [DE92-040244] p 51 N93-13522

- Adaptive filters for monitoring localized brain activity from surface potential time series

- [DE93-003795] p 217 N93-22774

- Biomagnetic localization from transient quasi-static events

- [DE93-007328] p 253 N93-25186

- The acute inhalation toxicity of pyrolysis products of halon 1301

- [AD-A260874] p 254 N93-25629

- Evaluation of NO(x)-induced toxicity  
[AD-A261034] p 283 N93-28122
- Louisiana State Univ., Baton Rouge.**  
A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019917] p 40 N93-13034
- A physico-chemical study of some areas of fundamental significance to biophysics  
[DE92-019916] p 40 N93-13083
- Louisiana Tech Univ., Ruston.**  
Utilization of the graded universal testing system to increase the efficiency for assessing aerobic and anaerobic capacity  
p 246 N93-26077
- Loyola Univ., Chicago, IL.**  
Auditory processing of complex sounds across frequency channels  
[AD-A253612] p 13 N93-10650

## M

- Mainstream Engineering Corp., Rockledge, FL.**  
Lightweight passive microclimate cooling device  
[AD-A262262] p 317 N93-28112
- Marine Biological Lab., Woods Hole, MA.**  
Abstracts of papers presented at the annual meeting of the Society of General Physiologists  
[AD-A257718] p 121 N93-18211
- Maryland Inst. for Emergency Medical Services, Baltimore.**  
Development and enhancement of a mode of performance and decision making under stress in a real life setting  
[AD-A257796] p 123 N93-18363
- Maryland Univ., Baltimore.**  
Development and enhancement of a model of performance and decision making under stress in a real life setting  
[AD-A255699] p 99 N93-16111
- Maryland Univ., College Park.**  
Coordinated action in 3-D space  
[AD-A249830] p 31 N93-10994
- Architecture of autonomous systems  
[NASA-CR-192974] p 266 N93-26047
- Coordinated action in 3-D space  
[AD-A261418] p 261 N93-26449
- Massachusetts General Hospital, Boston.**  
Cognition in the brain: Investigations using positron emission tomography  
[AD-A254280] p 14 N93-10765
- Center of Excellence in laser medicine  
[DE92-018760] p 22 N93-11445
- Massachusetts Inst. of Tech., Cambridge.**  
Super auditory localization for improved human-machine interfaces  
[AD-A254699] p 34 N93-12229
- Design requirements for force reflecting master controllers  
p 139 N93-18035
- Why do we see three-dimensional objects?  
[AD-A259892] p 224 N93-23986
- Comparative mutagenesis of human cells in vivo and in vitro  
[DE93-012269] p 276 N93-28651
- Programmable interactive system for cochlear implant electrode stimulation  
[AD-A262558] p 333 N93-29421
- Massachusetts Inst. of Tech., Lexington.**  
Parametric study of diffusion-enhancement networks for spatiotemporal grouping in real-time artificial vision  
[AD-A256059] p 58 N93-14580
- Massachusetts Univ., Amherst.**  
Adaptation to transient postural perturbations  
[NASA-CR-190959] p 105 N93-16699
- Materials Research Labs., Ascot Vale (Australia).**  
Membrane technology: A search for membranes for submarine atmosphere control  
[AD-A260581] p 266 N93-25904
- McDonnell-Douglas Space Systems Co., Houston, TX.**  
Intelligent fault management for the Space Station active thermal control system  
p 32 N93-11930
- Hyperbaric treatment  
p 360 N93-31454
- Daily exercise routines  
p 360 N93-31455
- McDonnell-Douglas Space Systems Co., Huntington Beach, CA.**  
Distributed environmental control  
p 32 N93-11924
- Evolving EVA system capability for the evolving Space Station Freedom requirements  
p 312 N93-27791
- Atmospheric control systems  
p 365 N93-31456
- Rotational speed control  
p 365 N93-31457
- Vibration isolation  
p 365 N93-31458
- McDonnell-Douglas Space Systems Co., Huntsville, AL.**  
Space Station ECLSS integration analysis  
[NASA-CR-192470] p 195 N93-22002
- Technologies for ECLSS evolution  
p 311 N93-27720

- Medical Research Council, London (England).**  
The central executive component of working memory  
[AD-A258724] p 135 N93-20326
- Memphis State Univ., TN.**  
Questioning mechanisms during complex learning  
[AD-A247382] p 26 N93-11415
- Mercer Univ., Macon, GA.**  
Investigation into the common mode rejection ratio of the physiological signal conditioner circuit  
p 245 N93-26073
- Messerschmitt-Boelkow-Blohm G.m.b.H., Munich (Germany).**  
Biochemically active layers for selective material detection sensors  
[MBB-Z-0440-92-PUB] p 158 N93-20959
- User areas in aircraft cockpit, using methods of rapid prototype development  
[MBB-FE-315-S-PUB-0493] p 196 N93-22389
- Messerschmitt-Boelkow-Blohm G.m.b.H., Ottobrunn (Germany).**  
Instructions and advance training measures for the improvement of human reliability  
[MBB-FE-313-S-PUB-0500] p 181 N93-21402
- Michigan State Univ., East Lansing.**  
Interdisciplinary research and training program in the plant sciences  
[DE92-015919] p 5 N93-10835
- Michigan Univ., Ann Arbor.**  
New techniques for positron emission tomography in the study of human neurological disorders  
[DE92-015353] p 23 N93-11873
- New techniques for positron emission tomography in the study of human neurological disorders  
[DE93-002098] p 95 N93-15900
- Non-invasive evaluation of the cardiac autonomic nervous system by PET  
[DE92-041077] p 96 N93-16441
- Helmeted head and neck dynamics under whole-body vibration  
p 264 N93-25531
- Discomfort glare from high-intensity discharge headlamps: Effects of context and experience  
[PB93-174720] p 336 N93-30659
- Minnesota Univ., Minneapolis.**  
Design, construction, and control of a two degree-of-freedom electric direct-drive human power amplifier  
p 65 N93-13486
- Psychophysical analyses of perceptual representations  
[AD-A255432] p 58 N93-14510
- Mitre Corp., Bedford, MA.**  
Measures of user-system interface effectiveness: Assessment of structured judgment evaluation techniques for graphical, direct-manipulation style interfaces  
[AD-A254493] p 63 N93-12576
- Measures of user-system interface effectiveness: An encoding scheme and indicators for assessing the usability of graphical, direct-manipulation style user interfaces  
[AD-A260606] p 265 N93-25840
- Head mounted displays for virtual reality  
[AD-A263498] p 322 N93-29340
- Monterey Technologies, Inc., Carmel, CA.**  
Autonomic physiological data associated with simulator discomfort  
[NASA-CR-177609] p 222 N93-24738
- Mote Marine Lab., Sarasota, FL.**  
Phytoplankton photosynthesis in natural mixed layers  
[AD-A255010] p 39 N93-12871
- Mount Sinai School of Medicine, New York, NY.**  
NASA supporting studies for microgravity research on eye movements  
[NASA-CR-193233] p 285 N93-29041

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- Nagoya Univ. (Japan).**  
Telepresence testbedding for physiological experiments under hypobaric hypoxic conditions  
p 220 N93-24398
- National Academy of Sciences - National Research Council, Washington, DC.**  
Assessment of programs in space biology and medicine  
[NASA-CR-190930] p 41 N93-13327
- Body composition and physical performance  
[AD-A255627] p 69 N93-14161
- Monitoring human tissues for toxic substances  
[PB92-223239] p 173 N93-21498
- National Aeronautics and Space Administration, Washington, DC.**  
The space life sciences strategy for the 21st century  
p 1 A93-10636
- Electronystagmography and audio potentials in space flight  
p 9 A93-11675
- Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System  
p 28 A93-12222

- Potential health risks from postulated accidents involving the Pu-238 RTG on the Ulysses solar exploration mission  
p 43 A93-13774
- Anisotropy in an ambiguous kinetic depth effect  
p 55 A93-14097
- Human speed perception is contrast dependent  
p 55 A93-14119
- Hazard alerting and situational awareness in advanced air transport cockpits  
p 61 A93-14377
- Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion  
p 44 A93-14968
- Beta-endorphin and arginine vasopressin following stressful sensory stimuli in man  
p 47 A93-16158
- Methane transport mechanisms and isotopic fractionation in emergent macrophytes of an Alaskan tundra lake  
p 38 A93-16544
- Exobiology science objectives at a lunar base  
p 71 A93-17435
- New pharmacologic approaches to the prevention of space/motion sickness  
p 85 A93-17538
- Cornet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium  
p 108 A93-17824
- Comets and the origins and evolution of life: Proceedings of the Conference, Univ. of Wisconsin, Eau Claire, Sept. 30-Oct. 2, 1991  
p 109 A93-17976
- Comets and the formation of biochemical compounds on the primitive earth - A review  
p 109 A93-17977
- Comets as a possible source of prebiotic molecules  
p 109 A93-17979
- The fate of organic matter during planetary accretion - Preliminary studies of the organic chemistry of experimentally shocked Murchison meteorite  
p 110 A93-17984
- Chemical environments of submarine hydrothermal systems  
p 74 A93-18005
- Hydrothermal organic synthesis experiments  
p 74 A93-18007
- Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy  
p 78 A93-20033
- Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity  
p 78 A93-20036
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p 79 A93-20651
- NASA plans and opportunities  
p 79 A93-20652
- Research on sleep, circadian rhythms and aging - Applications to manned spaceflight  
p 94 A93-20658
- Altered cell function in microgravity  
p 79 A93-20660
- The pituitary - Aging and spaceflight rats  
p 79 A93-20661
- Caenorhabditis elegans - A model system for space biology studies  
p 80 A93-20665
- The life span of the biosphere revisited  
p 149 A93-21847
- Blood volume reduction counteracts fluid shifts in water immersion  
p 118 A93-25206
- Human speed perception is contrast dependent  
p 174 A93-26950
- Tryptophan availability modulates serotonin release from rat hypothalamic slices  
p 152 A93-27000
- Hypothalamic test results from an intelligent, free-flying robot for crew and equipment retrieval in space  
p 184 A93-27037
- Neutral buoyancy simulation of space telerobotics operations  
p 185 A93-27038
- Effects of running the Boston Marathon on plasma concentrations of large neutral amino acids  
p 160 A93-27048
- Effect of chronic D-fenfluramine administration on rat hypothalamic serotonin levels and release  
p 152 A93-27049
- Dopamine release in rat striatum - Physiological coupling to tyrosine supply  
p 152 A93-27050
- The earliest fossil evidence for sexual dimorphism in primates  
p 152 A93-27775
- Long-range anticorrelations and non-Gaussian behavior of the heartbeat  
p 161 A93-28049
- Habitable zones around main sequence stars  
p 197 A93-28376
- Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars  
p 197 A93-28377
- Thermoregulatory responses of rhesus monkeys during spaceflight  
p 154 A93-28706
- Localization of extracellular matrix components in developing mouse salivary glands by confocal microscopy  
p 155 A93-28725
- Alterations in biosynthetic accumulation of collagen types I and III during growth and morphogenesis of embryonic mouse salivary glands  
p 156 A93-28746
- A distributed telerobotics system for space operations  
p 192 A93-29132



- Centralized, decentralized, and independent control of a flexible manipulator on a flexible base  
p 231 A93-31517
- Atomic structure and chemistry of human serum albumin  
p 200 A93-31628
- Flight-path estimation in passive low-altitude flight by visual cues  
p 223 A93-32004
- Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from *Halobacterium saccharovorum*  
p 201 A93-32116
- Effects of systemic L-tyrosine on dopamine release from rat corpus striatum and nucleus accumbens  
p 201 A93-32118
- Serotonin release varies with brain tryptophan levels  
p 201 A93-32119
- Melatonin and its precursors in Y79 human retinoblastoma cells - Effect of sodium butyrate  
p 214 A93-32120
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1  
p 203 A93-32850
- Revision of the Wind River faunas, early Eocene of central Wyoming. X - Bunophorus (Mammalia, Artiodactyla)  
p 203 A93-33026
- Alanine increases blood pressure during hypotension  
p 203 A93-33027
- Melatonin concentrations in the sudden infant death syndrome  
p 203 A93-33030
- Effects of their nutrient precursors on the synthesis and release of serotonin, the catecholamines, and acetylcholine - Implications for behavioral disorders  
p 204 A93-33033
- The pineal gland - Its possible roles in human reproduction  
p 204 A93-33036
- Tyrosine - Effects on catecholamine release  
p 204 A93-33038
- Proposed evaluation framework for assessing operator performance with multisensor displays  
p 232 A93-33444
- Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining  
p 242 A93-35498
- NASA's telerobotics research program  
p 263 A93-35566
- Laboratory simulation of organic grain mantles  
p 268 A93-36554
- Performance consequences of automation-induced 'complacency'  
p 286 A93-39571
- Microfossils of the Early Archean Apex chert - New evidence of the antiquity of life  
p 272 A93-40308
- Absence of a growth hormone effect on rat soleus atrophy during a 4-day spaceflight  
p 272 A93-40548
- Direct measurement of capillary blood pressure in the human lip  
p 279 A93-40550
- Geography of end-Cretaceous marine bivalve extinctions  
p 273 A93-41075
- Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance  
p 280 A93-41119
- Performance and mood-state parameters during 30-day 6 deg head-down bed rest with exercise training  
p 281 A93-41169
- Overview of NASA's 1991 Life Support Systems Analysis Workshop  
p 290 A93-41310
- Program development for exercise countermeasures  
p 292 A93-41327
- Altered immunological response in mice subjected to stress and exposed to fungal spores  
p 274 A93-41391
- A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging  
p 298 A93-41423
- Power assist EVA glove development  
p 299 A93-41425
- NASA Specialized Center for Research and Training (NSCORT) in space environmental health  
p 307 A93-41517
- Inactivation of a model coliphage virus in water by iodine  
p 274 A93-41520
- Potential health effects of fume particles on the crew of spacecrafts  
p 308 A93-41545
- Potential health hazards from thermal degradation events - Particulate vs. gas phase effects  
p 282 A93-41546
- Design and evaluation of a payload to support plant growth onboard COMET 1  
p 308 A93-41547
- Dark cycle monitoring of biological specimens on Space Station Freedom  
p 274 A93-41551
- Visual specification of robot motion  
p 348 A93-42845
- Muscle glucose uptake in the rat after suspension by single hindlimb weight bearing  
p 326 A93-44178
- Revision of the Wind River faunas, early Eocene of central Wyoming. IX - The oldest known hystriomorphous rodent (Mammalia: Rodentia)  
p 328 A93-44903
- Separation of rat pituitary secretory granules by continuous flow electrophoresis  
p 329 A93-44933
- In vitro selection of optimal DNA substrates for T4 RNA ligase  
p 329 A93-44939
- Cell wall and enzyme changes during the graviresponse of the leaf-sheath pulvinus of oat (*Avena sativa*)  
p 329 A93-44941
- The Minitrion system for growth of small plants under controlled environment conditions  
p 358 A93-46471
- Dynamics of auxin movement in the gravistimulated leaf-sheath pulvinus of oat (*Avena sativa*)  
p 358 A93-46472
- Clinostats and centrifuges: Their use, value, and limitations in gravitational biological research; Symposium, Washington, Oct. 19, 1991, Report  
p 375 A93-49206
- Intramuscular pressure and electromyography as indexes of force during isokinetic exercise  
p 380 A93-49291
- Transcapillary fluid responses to lower body negative pressure  
p 380 A93-49292
- Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt  
p 381 A93-49295
- Alternating prism exposure causes dual adaptation and generalization to a novel displacement  
p 388 A93-51959
- Human locomotion and workload for simulated lunar and Martian environments  
p 394 A93-52406
- Medical concerns for exploration-class missions  
p 386 A93-52409
- Unexpected substrate specificity of T4 DNA ligase revealed by in vitro selection  
p 397 A93-52878
- The violent environment of the origin of life - Progress and uncertainties  
p 412 A93-53292
- Comment on 'Summary and implications of reported amino acid concentrations in the Murchison meteorite' by E. L. Shock and M. D. Schulte  
p 412 A93-53294
- Meeting human needs  
p 400 A93-54306
- NASA's manned space flight program  
p 402 A93-55805
- Carbonaceous chondrites and the origin of life  
p 412 A93-55997
- Oligomerization reactions of ribonucleotides - The reaction of the 5'-phosphorimidazole of adenosine with diadenosine pyrophosphate on montmorillonite and minerals  
p 412 A93-55998
- Isolation of new ribozymes from a large pool of random sequences  
p 400 A93-56548
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 365)  
p 12 N93-10075
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 360)  
p 12 N93-10076
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 364)  
p 12 N93-10077
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 366)  
p 12 N93-10079
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 367)  
p 12 N93-10080
- NASA Space Human Factors Program  
p 31 N93-10890
- Suited for spacewalking: A teacher's guide with activities  
p 65 N93-13692
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 368)  
p 53 N93-14603
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 369)  
p 53 N93-14731
- Biomedical Polar Research Workshop Minutes  
p 81 N93-16799
- Epidemiologic research in Antarctica  
p 81 N93-16800
- Summary of presentation for research on social structure, agreement, and conflict in groups in extreme and isolated environments  
p 99 N93-16801
- NASA/NSF Antarctic Science Working Group  
p 81 N93-16802
- Exercise during long term exposure to space: Value of exercise during space exploration  
p 82 N93-16807
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 370)  
p 121 N93-18108
- Exobiology: The NASA program  
p 114 N93-18561
- Cardiopulmonary discipline science plan  
p 125 N93-19648
- Neuroscience discipline science plan  
p 128 N93-19882
- Regulatory physiology discipline science plan  
p 115 N93-19891
- Musculoskeletal discipline science plan  
p 128 N93-19892
- Aerospace medicine and biology: A cumulative index to a continuing bibliography (supplement 371)  
p 172 N93-20889
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 372)  
p 172 N93-21044
- Environmental health discipline science plan  
p 173 N93-21369
- Space human factors discipline science plan  
p 194 N93-21370
- Life sciences utilization of Space Station Freedom  
p 205 N93-22622
- Life sciences recruitment objectives  
p 205 N93-22623
- Biomedical Monitoring and Countermeasures Facility  
p 205 N93-22624
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 373)  
p 256 N93-26945
- EVA/manned systems  
p 312 N93-27789
- Aerospace medicine and biology: A continuing bibliography with indexes (supplement 377)  
p 361 N93-31924
- National Aeronautics and Space Administration. Ames Research Center, Moffett Field, CA.
- Human support for Mars exploration - Issues and approaches  
p 27 A93-12077
- Simulation and flight test evaluation of head-up-display guidance for Harrier approach transitions  
p 28 A93-13331
- Anisotropy in an ambiguous kinetic depth effect  
p 55 A93-14097
- Locus of the single-channel bottleneck in dual-task interference  
p 55 A93-14098
- Human speed perception is contrast dependent  
p 55 A93-14119
- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath)  
p 37 A93-14121
- Altered baseline blood volume and the norepinephrine response to stress in humans  
p 43 A93-14123
- Hazard alerting and situational awareness in advanced air transport cockpits  
p 61 A93-14377
- Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion  
p 44 A93-14968
- Myosin heavy chain composition in the rat diaphragm - Effect of age and exercise training  
p 37 A93-14970
- Rat cardiovascular responses to whole body suspension - Head-down and non-head-down tilt  
p 37 A93-14974
- Exobiology science objectives at a lunar base  
p 71 A93-17435
- Drug effects on orthostatic intolerance induced by bedrest  
p 86 A93-17544
- Model for the computation of self-motion in biological systems  
p 97 A93-17673
- Factors influencing perceived angular velocity  
p 97 A93-17800
- Comet Halley as an aggregate of interstellar dust and further evidence for the photochemical formation of organics in the interstellar medium  
p 108 A93-17824
- Involuntary attentional capture by abrupt onsets  
p 97 A93-17974
- Comet impacts and chemical evolution on the bombarded earth  
p 109 A93-17980
- Distance and organization in multifunction displays  
p 102 A93-19986
- Using the stereokinetic effect to convey depth  
p 102 A93-19987
- Computationally efficient depth-from-motion displays  
p 102 A93-19987
- Eccentric exercise training as a countermeasure to non-weight-bearing soleus muscle atrophy  
p 78 A93-20033
- Effects of insulin and exercise on rat hindlimb muscles after simulated microgravity  
p 78 A93-20036
- Influence of animation on dynamical judgments  
p 98 A93-20275
- Sleep and circadian rhythms  
p 94 A93-20659
- The pituitary - Aging and spaceflight rats  
p 79 A93-20661
- The perception of heading during eye movements  
p 99 A93-20692
- Computer-assisted three-dimensional reconstruction and simulations of vestibular macular neural connectivities  
p 104 A93-20700
- Visual display aid for orbital maneuvering - Design considerations  
p 135 A93-23518
- Visual display aid for orbital maneuvering - Experimental evaluation  
p 136 A93-23519

- Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500
- Human visual performance model for crewstation design p 182 A93-26887
- Pictorial communication in virtual and real environments [ISBN 0-74840-008-7] p 182 A93-26896
- Human speed perception is contrast dependent p 174 A93-26950
- Headphone localization of speech stimuli p 176 A93-27143
- Electronic map interpretation in a dual-task context p 176 A93-27144
- Individual differences in airline captains' personalities, communication strategies, and crew performance p 177 A93-27175
- Spatial orientation and dynamics in virtual reality systems - Lessons from flight simulation p 178 A93-27185
- Exocentric judgements in real environments and stereoscopic displays p 189 A93-27190
- Human factors issues in the use of night vision devices p 189 A93-27193
- S-R compatibility effects with orthogonal stimulus and response dimensions p 179 A93-27194
- Overconfidence, preview, and probability in strategic planning p 179 A93-27195
- Pilot interaction with cockpit automation - Operational experiences with the Flight Management System p 189 A93-27455
- The possibility of life on Mars during a water-rich past p 196 A93-27887
- Habitable zones around main sequence stars p 197 A93-28376
- Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377
- The effects of growth temperature on the methyl sterol and phospholipid fatty acid composition of *Methylococcus capsulatus* (Bath) p 153 A93-28691
- Influence of animation on dynamical judgments p 180 A93-28692
- Rett syndrome - Stimulation of endogenous biogenic amines p 164 A93-28697
- Normalization of cell responses in cat striate cortex p 154 A93-28700
- Half-squaring in responses of cat striate cells p 157 A93-28748
- Dimensions of complexity in learning from interactive instruction p 191 A93-29111
- Human-like agents with posture planning ability p 192 A93-29118
- A distributed telerobotics system for space operations p 192 A93-29132
- Age, circadian rhythms, and sleep loss in flight crews p 211 A93-30276
- Compatibility and consistency in display-control systems - Implications for aircraft decision aid design p 230 A93-30454
- Antagonistic otolith-visual units in cat vestibular nuclei p 199 A93-30511
- Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004
- Cognitive competencies - Products of genes, experience, and technology p 201 A93-32113
- Purification and properties of an ATPase from *Sulfolobus solfataricus* p 201 A93-32115
- Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from *Halobacterium saccharovorum* p 201 A93-32116
- Learning about primates' learning, language, and cognition p 201 A93-32124
- Melatonin in human preovulatory follicular fluid p 215 A93-32474
- Testing primates with joystick-based automated apparatus - Lessons from the Language Research Center's Computerized Test System p 202 A93-32651
- Analyzing the path of responding in maze-solving and other tasks p 202 A93-32652
- Mechanically induced alterations in cultured skeletal muscle growth p 202 A93-32749
- Linear vestibuloocular reflex during motion along axes between nasooccipital and interaural p 203 A93-32773
- Visual and somesthetic influences on postural orientation in the median plane p 224 A93-32782
- Effects of dietary amino acids, carbohydrates, and choline on neurotransmitter synthesis p 204 A93-33031
- Comparative assessment of psychomotor performance - Target prediction by humans and macaques (*Macaca mulatta*) p 204 A93-33035
- Mechanical forces and their second messengers in stimulating cell growth in vitro p 204 A93-33043
- Computer-aided mechanogenesis of skeletal muscle organs from single cells in vitro p 205 A93-33045
- Studies of the field-of-view resolution tradeoff in virtual-reality systems p 232 A93-33443
- Proposed evaluation framework for assessing operator performance with multisensor displays p 232 A93-33444
- The design of virtual spaces and virtual environments p 232 A93-33445
- Depth cue interaction in telepresence and simulated telemanipulation p 232 A93-33446
- Timing considerations of Helmet Mounted Display performance p 233 A93-33449
- The Biological Flight Research Facility p 239 A93-34581
- Things that go bump in the light - On the optical specification of contact severity p 256 A93-35099
- Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498
- Helmet Mounted Display symbology integration research p 263 A93-35914
- Visual cues in low-level flight - Implications for pilotage, training, simulation, and enhanced/synthetic vision systems p 264 A93-35918
- The impact of visual noise on spatial orientation p 257 A93-36229
- Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557
- Perceptual effects of synthetic reverberation on three-dimensional audio systems p 257 A93-36583
- And we were tired' fatigue and aircrew errors p 264 A93-37070
- 8-OH-DPAT does not interfere with habituation to motion-induced emesis in cats p 271 A93-38451
- Direct measurement of capillary blood pressure in the human lip p 279 A93-40550
- Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements p 287 A93-40772
- Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167
- Performance and mood-state parameters during 30-day 6 deg head-down bed rest with exercise training p 281 A93-41169
- Overview of NASA's 1991 Life Support Systems Analysis Workshop [SAE PAPER 921118] p 290 A93-41310
- Recycling and source reduction for long duration space habitation [SAE PAPER 921121] p 290 A93-41313
- Visualization and modeling of factors influencing visibility in computer-aided crewstation design [SAE PAPER 921135] p 292 A93-41323
- The Centrifuge Facility Life Sciences Glovebox configuration study [SAE PAPER 921158] p 293 A93-41341
- An approach to the functional optimization of the CELSS Test Facility [SAE PAPER 921199] p 295 A93-41375
- Consumables and wastes estimations for the First Lunar Outpost [SAE PAPER 921287] p 302 A93-41453
- Metabolic responses to simulated extravehicular activity [SAE PAPER 921303] p 282 A93-41468
- Biodeterioration of materials in water reclamation systems [SAE PAPER 921311] p 303 A93-41473
- A novel membrane device for the removal of water vapor and water droplets from air [SAE PAPER 921322] p 304 A93-41484
- Water reclamation technology development for future long range missions [SAE PAPER 921351] p 306 A93-41510
- Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models [SAE PAPER 921355] p 306 A93-41514
- Tests characterizing bioprocessor hardware for analytical modeling [SAE PAPER 921357] p 307 A93-41516
- Defining contamination control requirements for non-human research on Space Station Freedom [SAE PAPER 921386] p 308 A93-41544
- Design and evaluation of a payload to support plant growth onboard COMET 1 [SAE PAPER 921389] p 308 A93-41547
- Dark cycle monitoring of biological specimens on Space Station Freedom [SAE PAPER 921393] p 274 A93-41551
- The General Purpose Work Station, a spacious microgravity workbench [SAE PAPER 921394] p 309 A93-41552
- Regenerative life support technology challenges for the Space Exploration Initiative p 346 A93-42128
- Influence of simulated microgravity on the maximal oxygen consumption of nontrained and trained rats p 323 A93-42192
- Xylazine emesis, yohimbine and motion sickness susceptibility in the cat p 324 A93-42450
- Muscle glucose uptake in the rat after suspension with single hindlimb weight bearing p 326 A93-44178
- Spaceflight on STS-48 and earth-based unweighting produce similar effects on skeletal muscle of young rats p 326 A93-44179
- Activity-induced regulation of myosin isoform distribution - Comparison of two contractile activity programs p 326 A93-44183
- Interaction of various mechanical activity models in regulation of myosin heavy chain isoform expression p 327 A93-44184
- Relevance of antarctic microbial ecosystems to exobiology p 355 A93-44877
- Stimulation of lettuce productivity by manipulation of diurnal temperature and light p 327 A93-44879
- Modification of yield and chlorophyll content in leaf lettuce by HPS radiation and nitrogen treatments p 328 A93-44880
- The role of spatial attention in visual word processing p 339 A93-44922
- Behavioral asymmetries of psychomotor performance in rhesus monkeys (*Macaca mulatta*) - A dissociation between hand preference and skill p 339 A93-44923
- Vestibular afferent responses to microrotational stimuli p 328 A93-44930
- Hair cell tufts and afferent innervation of the bullfrog crista ampullaris p 329 A93-44931
- Effects of spaceflight on the spermatogonial population of rat seminiferous epithelium p 329 A93-44935
- Perceptual bias for forward-facing motion p 339 A93-44940
- Effects of incandescent radiation on photosynthesis, growth rate and yield of 'Waldmann's Green' leaf lettuce p 357 A93-46468
- Growth and yield characteristics of 'Waldmann's Green' leaf lettuce under different photon fluxes from metal halide or incandescent + fluorescent radiation p 357 A93-46469
- Minitron II system for precise control of the plant growth environment p 357 A93-46470
- Flight crew sleep during multiple layover polar flights p 380 A93-49226
- Intramuscular pressure and electromyography as indexes of force during isokinetic exercise p 380 A93-49291
- Transcapillary fluid responses to lower body negative pressure p 380 A93-49292
- Effect of hindlimb unweighting on single soleus fiber maximal shortening velocity and ATPase activity p 377 A93-49294
- Cerebral blood flow velocity in humans exposed to 24 h of head-down tilt p 381 A93-49295
- Alternating prism exposure causes dual adaptation and generalization to a novel displacement p 388 A93-51959
- Human locomotion and workload for simulated lunar and Martian environments p 394 A93-52406
- Modeling strategic behavior in human-automation interaction - Why an 'aid' can (and should) go unused p 394 A93-52502
- Cockpit checklists - Concepts, design, and use p 389 A93-52506
- Headphone localization of speech p 394 A93-52507
- Line-of-sight determination in real-time simulations [AIAA PAPER 93-3567] p 406 A93-52666
- Human factors with nonhumans - Factors that affect computer-task performance p 404 A93-52721
- Virtual environment display for a 3D audio room simulation p 408 A93-53125
- The violent environment of the origin of life - Progress and uncertainties p 412 A93-53292
- Incineration for resource recovery in a closed ecological life support system p 409 A93-54826
- A simple hindlimb suspension apparatus p 398 A93-55168
- Satiation or availability? Effects of attention, memory, and imagery on the perception of ambiguous figures p 405 A93-55348
- Effect of insulin-like factors on glucose transport activity in unweighted rat skeletal muscle p 399 A93-55458
- Role of the vestibular end organs in experimental motion sickness - A primate model p 399 A93-55933
- Animal models in motion sickness research p 399 A93-55936
- Investigating motion sickness using the conditioned taste aversion paradigm p 400 A93-55937
- Autogenic-feedback training - A treatment for motion and space sickness p 404 A93-55946
- Habitat automation p 33 A93-11976

- Effect of hemorrhage on cardiac output, vasopressin, aldosterone, and diuresis during immersion in men  
[NASA-TM-103949] p 6 N93-12014
- Techniques for optimal crop selection in a controlled ecological life support system  
[NASA-TM-103950] p 33 N93-12018
- An overview of gravitational physiology  
[NASA-TM-102849] p 35 N93-12319
- A voyage to Mars: A challenge to collaboration between man and machines p 70 N93-14614
- Passive zero-gravity leg restraint  
[NASA-CASE-ARC-11882-1-CU] p 70 N93-14713
- NASA/NSF Workshop on Antarctic Research p 81 N93-16803
- Exobiology in Solar System Exploration  
[NASA-SP-512] p 112 N93-18545
- Overview: Exobiology in solar system exploration p 112 N93-18546
- Venus: A search for clues to early biological possibilities p 113 N93-18549
- Mars: A reassessment of its interest to biology p 113 N93-18550
- Giant planets: Clues on current and past organic chemistry in the outer solar system p 113 N93-18551
- Europa: Prospects for an ocean and exobiological implications p 113 N93-18552
- Titan p 114 N93-18553
- Effect of contrast on human speed perception  
[NASA-TM-103898] p 141 N93-19104
- A membrane-based subsystem for water-vapor recovery from plant-growth chambers  
[NASA-CR-177602] p 149 N93-20065
- Studying the effects of microgravity on lower vertebrate development and behavior p 158 N93-21099
- Operator-assisted planning and execution of proximity operations subject to operational constraints p 194 N93-21436
- Closed Ecological Life Support Systems (CELSS) Test Facility p 233 N93-22628
- A demonstration of motion base design alternatives for the National Advanced Driving Simulator  
[NASA-TM-103881] p 236 N93-24490
- Space biology research development  
[NASA-CR-192830] p 244 N93-25242
- Vascular uptake of rehydration fluids in hypohydrated men at rest and exercise p 255 N93-26133
- Automation and robotics human performance  
[NASA-CR-193049] p 267 N93-26153
- Extravehicular activity technology discipline p 314 N93-27859
- Manned systems technology discipline p 314 N93-27860
- Helicopter simulation: An aircrew training and qualification perspective p 342 N93-30676
- Training effectiveness assessment: Where are we? p 342 N93-30679
- Current training: Where are we? p 342 N93-30680
- Training effectiveness assessment: Methodological problems and issues p 342 N93-30684
- National Aeronautics and Space Administration.**  
**Goddard Space Flight Center, Greenbelt, MD.**
- Characteristics and requirements of robotic manipulators for space operations p 182 A93-27003
- Evaluating robot procedures and tasks for the flight telerobotic service p 187 A93-27156
- Recent developments at the Goddard Engineering Test Bed p 192 A93-29115
- The Servicing Aid Tool p 192 A93-29116
- Safety issues of manipulator systems under computer control p 192 A93-29121
- Joint-space Lyapunov-based direct adaptive control of a kinematically redundant telerobot manipulator p 407 A93-53038
- Compliant walker  
[NASA-CASE-GSC-13348-2] p 53 N93-14708
- National Aeronautics and Space Administration. John F. Kennedy Space Center, Cocoa Beach, FL.**
- Altered baseline blood volume and the norepinephrine response to stress in humans p 43 A93-14123
- Magnetic resonance imaging and electromyography as indexes of muscle function p 44 A93-14975
- Effects of acute exercise on attenuated vagal baroreflex function during bed rest p 48 A93-16160
- Controlled Ecological Life Support System - CELSS p 62 A93-17432
- Controlled Ecological Life Support System (CELSS) modeling p 137 A93-25308
- Carotid-cardiac baroreflex response and LBNP tolerance following resistance training p 164 A93-28696
- Health services at the Kennedy Space Center p 154 A93-28711
- Emergency medical operations at Kennedy Space Center in support of space shuttle p 166 A93-28712
- Kennedy Space Center environmental health program p 166 A93-28713
- Environmental monitoring and research at the John F. Kennedy Space Center p 154 A93-28714
- Controlled ecological life-support system - Use of plants for human life-support in space p 190 A93-28715
- Challenges of space medical operations and life sciences management p 155 A93-28716
- Biomedical engineering - A means to add new dimension to medicine and research p 190 A93-28717
- Skeletal muscle responses to unloading with special reference to man p 166 A93-28718
- Cardiovascular physiology - Effects of microgravity p 166 A93-28719
- A comparison of neural network and fuzzy clustering techniques in segmenting magnetic resonance images of the brain p 214 A93-31267
- Enhanced carotid-cardiac baroreflex response and elimination of orthostatic hypotension 24 hours after acute exercise in paraplegics p 216 A93-32781
- Mapping of electrical muscle stimulation using MRI p 279 A93-40549
- OCAM - A CELSS modeling tool: Description and results p 298 A93-41413
- [SAE PAPER 921241] p 298 A93-41413
- Advanced life support systems in lunar and Martian environments utilizing a higher plant based engineering paradigm [SAE PAPER 921286] p 302 A93-41452
- Phenylethanolamine as a countermeasure for motion sickness in NASA maritime operations p 401 A93-55162
- Engineering verification of the biomass production chamber p 67 N93-13996
- Scenarios for optimizing potato productivity in a lunar CELSS p 67 N93-13997
- Toxic substances registry system: Index of material safety data sheets [NASA-TM-108582] p 172 N93-20998
- National Aeronautics and Space Administration.**  
**Lyndon B. Johnson Space Center, Houston, TX.**
- The influence of prior exercise at anaerobic threshold on decompression sickness p 8 A93-10333
- Electroretinography and audio potentials in space flight p 9 A93-11675
- Role of atrial natriuretic peptide in systemic responses to acute isotonic volume expansion p 44 A93-14968
- Time to detection of circulating microbubbles as a risk factor for symptoms of altitude decompression sickness p 46 A93-16153
- Beta-endorphin and arginine vasopressin following stressful sensory stimuli in man p 47 A93-16158
- Blood and urine responses to ingesting fluids of various salt and glucose concentrations p 83 A93-17528
- Development of lower body negative pressure as a countermeasure for orthostatic intolerance p 83 A93-17529
- Orthostatic function during a stand test before and after head-up or head-down bedrest p 84 A93-17530
- Human vestibular function and weightlessness p 84 A93-17531
- First intramuscular administration in the U.S. space program p 84 A93-17534
- Metabolic changes observed in astronauts p 84 A93-17535
- Pharmacologic considerations for Shuttle astronauts p 85 A93-17537
- New pharmacologic approaches to the prevention of space/motion sickness p 85 A93-17538
- Optimal sampling theory and population modelling - Application to determination of the influence of the microgravity environment on drug distribution and elimination p 85 A93-17542
- Acute hemodynamic response to weightlessness during parabolic flight p 86 A93-17547
- Changes in total body water during spaceflight p 86 A93-17548
- Cardiovascular adaptation to spaceflight p 86 A93-17550
- Echocardiographic evaluation of the cardiovascular effects of short-duration spaceflight p 87 A93-17551
- Space medicine - Answering the challenge p 87 A93-17552
- Cerebral blood flow - Comparison of ground-based and spaceflight data and correlation with space adaptation syndrome p 87 A93-17553
- Regional changes in muscle mass following 17 weeks of bed rest p 93 A93-20039
- Cardiovascular physiology in space flight p 93 A93-20654
- Can the adult skeleton recover lost bone? p 93 A93-20656
- The pituitary - Aging and spaceflight rats p 79 A93-20661
- Effects of scopolamine on autonomic profiles underlying motion sickness susceptibility p 116 A93-24037
- Animal surgery in microgravity p 112 A93-24047
- Blood volume reduction counteracts fluid shifts in water immersion p 118 A93-25206
- Future needs for space robots for SEI p 182 A93-27002
- Grasp synthesis for planar and solid objects p 184 A93-27034
- Technology test results from an intelligent, free-flying robot for crew and equipment retrieval in space p 184 A93-27037
- Adaptive strategies of remote systems operators exposed to perturbed camera-viewing conditions p 187 A93-27155
- Task-analytic evaluations of Space Station Freedom workstations p 187 A93-27157
- Display format and highlight validity effects on search performance using complex visual displays p 187 A93-27160
- Using GOMS models and hypertext to create representations of medical procedures for online display p 188 A93-27170
- An improved simulation based biomechanical model to estimate static muscle loadings p 160 A93-27172
- Networked simulation for team training of Space Station astronauts, ground controllers, and scientists - A training and development environment p 179 A93-27188
- Atrial natriuretic peptide degradation by CPA47 cells - Evidence for a divalent cation-independent cell-surface proteolytic activity p 155 A93-28726
- In vivo testing confirms a blunting of the human cell-mediated immune mechanism during space flight p 167 A93-28732
- Neurology of microgravity and space travel p 168 A93-28735
- Cooperative intelligent robotics in space III; Proceedings of the Meeting, Boston, MA, Nov. 16-18, 1992 [SPIE-1829] p 190 A93-29101
- Person-like intelligent systems architectures for robotic shared control and automated operations p 191 A93-29113
- Telerobotic system performance measurement - Motivation and methods p 191 A93-29114
- Human-like agents with posture planning ability p 192 A93-29118
- A distributed telerobotics system for space operations p 192 A93-29132
- Testbed for remote telepresence research p 193 A93-29135
- An experiment in vision based autonomous grasping within a reduced gravity environment p 193 A93-29137
- Multicultural factors in the space environment - Results of an international shuttle crew debrief p 222 A93-30277
- Treatment efficacy of intramuscular promethazine for Space Motion Sickness p 212 A93-30283
- Limitations to the study of man in space in the U.S. space program p 213 A93-30285
- Prevention of space flight induced soft tissue calcification and disuse osteoporosis p 214 A93-31545
- Relation between perception of vertical axis rotation and vestibulo-ocular reflex symmetry p 214 A93-32176
- Single particle effects, Biostack, and risk evaluation - Studies on the radiation risk from Galactic cosmic rays p 202 A93-32243
- Human low vision image warping - Channel matching considerations p 231 A93-32444
- Response characteristics of the human torsional vestibuloocular reflex p 215 A93-32774
- Development of a large space robot - A multi-segment approach. I p 261 A93-34012
- [AIAA PAPER 93-1463] p 261 A93-34012
- Development of a large space robot - A multi-segment approach. II p 262 A93-34013
- [AIAA PAPER 93-1464] p 262 A93-34013
- Body fluid alterations during head-down bed rest in men at moderate altitude p 251 A93-35493
- Effects of prolonged head-down bed rest on physiological responses to moderate hypoxia p 251 A93-35494
- Human performance and physiological function during a 24-hr exposure to 1 percent bromotrifluoromethane (Halon 1301) p 277 A93-39704
- Toxicokinetics of inhaled bromotrifluoromethane (Halon 1301) in human subjects p 278 A93-39705
- Orthostatic intolerance during a 13-day bed rest does not result from increased leg compliance p 280 A93-41119
- Cerebral blood velocity and other cardiovascular responses to 2 days of head-down tilt p 280 A93-41122
- Overview of NASA's 1991 Life Support Systems Analysis Workshop [SAE PAPER 921118] p 290 A93-41310
- Analysis of the Variable Pressure Growth Chamber using the CASE/A simulation package [SAE PAPER 921122] p 291 A93-41314

- Space Station Freedom Environmental Health Care Program  
[SAE PAPER 921138] p 292 A93-41325
- Program development for exercise countermeasures  
[SAE PAPER 921140] p 292 A93-41327
- A comparison of two Shuttle launch and entry suits - Reach envelope, isokinetic strength, and treadmill tests  
[SAE PAPER 921154] p 293 A93-41337
- Pilot investigation - Nominal crew induced forces in zero-g  
[SAE PAPER 921155] p 293 A93-41338
- Operational space human factors - Methodology for a DSO  
[SAE PAPER 921156] p 293 A93-41339
- A study to explore locomotion patterns in partial gravity environments  
[SAE PAPER 921157] p 293 A93-41340
- Design of a Shuttle air and water prefilter for reduced gravity operation  
[SAE PAPER 921161] p 294 A93-41343
- Conceptual design of ECLSS microgravity test beds  
[SAE PAPER 921164] p 294 A93-41346
- A systems approach to water recovery testing for space life support - Initial biomedical results from the ECLSS Water Recovery Test and plans for testbed utilization  
[SAE PAPER 921210] p 295 A93-41386
- Microbiology operations and facilities aboard restructured Space Station Freedom  
[SAE PAPER 921213] p 296 A93-41389
- Effects of refrigerating preinoculated Vitek cards on microbial physiology and antibiotic susceptibility  
[SAE PAPER 921214] p 273 A93-41390
- Altered immunological response in mice subjected to stress and exposed to fungal spores  
[SAE PAPER 921215] p 274 A93-41391
- Microbiological concerns and methodological approaches related to bacterial water quality in spaceflight  
[SAE PAPER 921232] p 297 A93-41406
- Space Station Freedom food management  
[SAE PAPER 921248] p 298 A93-41419
- Enhanced softgoods structures for spacesuit micrometeoroid/debris protective systems  
[SAE PAPER 921258] p 299 A93-41428
- The development and testing of a volatile organics concentrator for use in monitoring Space Station water quality  
[SAE PAPER 921266] p 300 A93-41436
- Evaluation of capillary electrophoresis for in-flight ionic contaminant monitoring of SSF potable water  
[SAE PAPER 921268] p 300 A93-41438
- An assessment of waste processing/resource recovery technologies for lunar/Mars life applications  
[SAE PAPER 921271] p 300 A93-41441
- Post-treatment of reclaimed waste water based on an electrochemical advanced oxidation process  
[SAE PAPER 921275] p 301 A93-41444
- A hybrid regenerative water recovery system for lunar/Mars life support applications  
[SAE PAPER 921276] p 301 A93-41445
- Development of a regenerable metal oxide sheet matrix CO<sub>2</sub> removal system  
[SAE PAPER 921298] p 302 A93-41463
- Portable life support system regenerative carbon dioxide and water vapor removal by metal oxide absorbents preprototype hardware development and testing  
[SAE PAPER 921299] p 303 A93-41464
- Biofilm formation and control in a simulated spacecraft water system - Three year results  
[SAE PAPER 921310] p 303 A93-41472
- Use of sorption technology for treatment of humidity condensate for potable water  
[SAE PAPER 921312] p 303 A93-41474
- Regenerable Microbial Check Valve - Life cycle tests results  
[SAE PAPER 921316] p 303 A93-41478
- Operation of a breadboard liquid-sorbent/membrane-contact system for removing carbon dioxide and water vapor from air  
[SAE PAPER 921321] p 304 A93-41483
- Performance evaluation of candidate space suit elements for the next generation orbital EMU  
[SAE PAPER 921344] p 305 A93-41503
- Space Shuttle crew compartment debris-contamination  
[SAE PAPER 921345] p 305 A93-41504
- Space Shuttle Orbiter oxygen partial pressure sensing and control system improvements  
[SAE PAPER 921347] p 305 A93-41506
- Shuttle Orbiter Environmental Control and Life Support System - Flight experience  
[SAE PAPER 921348] p 305 A93-41507
- Modeling of membrane processes for air revitalization and water recovery  
[SAE PAPER 921352] p 306 A93-41511
- Plant canopy transpiration in bioregenerative life support systems - The link between mechanistic and empirical models  
[SAE PAPER 921355] p 306 A93-41514
- Plant growth modeling at the JSC variable pressure growth chamber - An application of experimental design  
[SAE PAPER 921356] p 307 A93-41515
- ASDA - Advanced Suit Design Analyzer computer program  
[SAE PAPER 921381] p 308 A93-41539
- First entry operations for spacecraft  
[SAE PAPER 921384] p 308 A93-41542
- Regenerative Life Support Systems Test Bed performance - Lettuce crop characterization  
[SAE PAPER 921391] p 309 A93-41549
- Setting Spacecraft Maximum Allowable Concentrations for 1 hour or 24 hour contingency exposures to airborne chemicals  
[SAE PAPER 921410] p 310 A93-41564
- The role of Environmental Health System air quality monitors in Space Station Contingency Operations  
[SAE PAPER 921414] p 310 A93-41565
- EVA operational guidelines and considerations for use during the Space Station Freedom design review process  
p 345 A93-42119
- Utilization of on-site resources for Regenerative Life Support Systems at a lunar outpost  
p 346 A93-42124
- An analysis of human performance in simulated partial-gravity environments  
p 347 A93-42173
- Response of a mouse hybridoma cell line to heat shock, agitation, and sparging  
p 328 A93-44928
- Intracellular proteins produced by mammalian cells in response to environmental stress  
p 328 A93-44929
- The internal dynamics of slowly rotating biological systems  
p 375 A93-49208
- Changes in the dark focus of accommodation associated with simulator sickness  
p 379 A93-49222
- Transcapillary fluid responses to lower body negative pressure  
p 380 A93-49292
- Spatial orientation, adaptation, and motion sickness in real and virtual environments  
p 382 A93-49403
- Mental rotation - A key to mitigation of motion sickness in the virtual environments?  
p 387 A93-49404
- Depth-dose equivalent relationship for cosmic rays at various solar minima  
p 391 A93-49564
- Microwave digestion preparation and ICP determination of boron in human plasma  
p 377 A93-49570
- Human-in-the-loop evaluation of RMS Active Damping Augmentation  
[AIAA PAPER 93-3875] p 393 A93-51460
- Comparison of treatment strategies for space motion sickness  
p 386 A93-52402
- Pulmonary diffusing capacity, capillary blood volume, and cardiac output during sustained microgravity  
p 386 A93-52617
- Design of a reading test for low vision image warping  
p 400 A93-53025
- Role of the vestibular end organs in experimental motion sickness - A primate model  
p 399 A93-55933
- Physiology of motion sickness symptoms  
p 403 A93-55939
- Space motion sickness monitoring experiment - Spacelab 1  
p 403 A93-55941
- Statistical prediction of space motion sickness  
p 403 A93-55943
- Method for culturing mammalian cells in a perfused bioreactor  
[NASA-CASE-MSC-21293-2] p 4 N93-10109
- Method for culturing mammalian cells in a horizontally rotated bioreactor  
[NASA-CASE-MSC-21294-2] p 5 N93-10110
- The locator system for wandering individuals  
[NASA-TM-104754] p 31 N93-11649
- A health care system for the Space Station  
[NASA-TM-108093] p 65 N93-13571
- Crop growth and associated life support for a lunar farm  
p 67 N93-13994
- Technology development for lunar base water recycling  
p 67 N93-13999
- The lunar community church: Contributions to lunar living and to evolution of ethical and spiritual thinking  
p 57 N93-14020
- A comparison of hand grasp breakaway strengths and bare-handed grip strengths of the astronauts, SML 3 test subjects, and the subjects from the general population  
[NASA-TP-3286] p 96 N93-16619
- Infectious disease  
p 81 N93-16804
- Nutrition  
p 81 N93-16805
- Kinetic tetrazolium microtiter assay  
[NASA-CASE-MSC-21979-1] p 82 N93-17049
- Control system and method for prosthetic devices  
[NASA-CASE-MSC-21941-1] p 106 N93-17087
- Protective helmet assembly  
[NASA-CASE-MSC-21842-1] p 106 N93-17088
- Inflatable habitation for the lunar base  
p 106 N93-17442
- Regenerable biocide delivery unit  
[NASA-CASE-MSC-21763-1-SB] p 112 N93-18351
- The Moon: Biogenic elements  
p 113 N93-18548
- High density cell culture system  
[NASA-CASE-MSC-22060-1] p 114 N93-19037
- Active synthetic soil  
[NASA-CASE-MSC-21954-1-NP] p 114 N93-19054
- Radiological assessment for Space Station Freedom  
[NASA-TM-104758] p 128 N93-20303
- Effect of aerobic capacity on Lower Body Negative Pressure (LBNP) tolerance in females  
[NASA-TP-3298] p 128 N93-20318
- Physiological responses to wearing the space shuttle launch and entry suit and the prototype advanced crew escape suit compared to the unsuited condition  
[NASA-TP-3297] p 149 N93-20319
- Crew health  
p 217 N93-22630
- Zero-G life support for Space Station Freedom  
p 233 N93-22640
- Evaluation of hole sizes in structures requiring EVA services as a means to prevent gloved-hand finger entrapment  
[NASA-TM-104767] p 234 N93-23129
- Two techniques for measuring locomotion impact forces during zero G  
[NASA-TP-3305] p 217 N93-23410
- Comparison of total body water estimates from O-18 and bioelectrical response prediction equations  
[NASA-TP-3299] p 218 N93-23734
- Measuring the metastatic potential of cancer cells  
p 244 N93-25566
- MAC to VAX connectivity: Heart rate spectral analysis system  
p 254 N93-25594
- The application of integrated knowledge-based systems for the Biomedical Risk Assessment Intelligent Network (BRAIN)  
p 258 N93-25595
- Evaluation of lens distortion errors in video-based motion analysis  
[NASA-TP-3266] p 258 N93-25736
- JSC ECLSS R/T program overview  
p 312 N93-27725
- Extravehicular activity system  
p 312 N93-27787
- Man-systems distributed system for Space Station Freedom  
p 312 N93-27788
- Evolving technologies for Space Station Freedom computer-based workstations  
p 313 N93-27794
- Anthropometric data from launch and entry suited test subjects for the design of a recumbent seating system  
[NASA-TM-104769] p 321 N93-29044
- Anthropometric survey of the astronaut applicants and astronauts from 1985 to 1991  
[NASA-RP-1304] p 321 N93-29324
- Pharmacokinetics and Pharmacodynamics in Space  
[NASA-CP-10048] p 333 N93-29502
- An accelerated training method for back propagation networks  
[NASA-CASE-MSC-21625-1] p 340 N93-29610
- Issues on human acceleration tolerance after long-duration space flights  
[NASA-TM-104753] p 334 N93-29651
- Integration of advanced teleoperation technologies for control of space robots  
p 366 N93-32107
- A decision-theoretic approach to the display of information for time-critical decisions: The Vista project  
p 367 N93-32152
- Health maintenance facility system effectiveness testing  
[NASA-TM-104737] p 372 N93-32328
- National Aeronautics and Space Administration.**  
**Langley Research Center, Hampton, VA.**
- Cortical localization of cognitive function by regression of performance on event-related potentials  
p 9 A93-10337
- Dynamic analysis to evaluate viscoelastic passive damping augmentation for the Space Shuttle Remote Manipulator System  
p 28 A93-12222
- Radiation exposure predictions for long-duration-stay Mars missions  
[AIAA PAPER 92-4584] p 28 A93-13288
- High-speed civil transport - Advanced flight deck challenges  
[AIAA PAPER 92-4231] p 28 A93-13357
- Radiation exposure and dose estimates for a nuclear-powered manned Mars sprint mission  
p 60 A93-13817
- Hazard alerting and situational awareness in advanced air transport cockpits  
p 61 A93-14377
- Interplanetary crew exposure estimates for galactic cosmic rays  
p 87 A93-17975
- Track structure model for damage to mammalian cell cultures during solar proton events  
p 75 A93-18073
- Teleoperation to robotics at Langley Research Center  
p 101 A93-18569
- Evaluation of inertial devices for the control of large, flexible, space-based telerobotic arms  
p 101 A93-18710

- Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846
- Interactive Scene Analysis Module - A sensor-database fusion system for telerobotic environments p 184 A93-27032
- Evaluation of conformational and body-axis attitude information for spatial awareness p 229 A93-30070
- Predictive nosepointing and flightpath displays for air-to-air combat p 229 A93-30071
- Centralized, decentralized, and independent control of a flexible manipulator on a flexible base p 231 A93-31517
- Active vibration damping of the Space Shuttle remote manipulator system p 231 A93-31993
- Temporal analysis of the October 1989 proton flare using computerized anatomical models p 216 A93-32785
- Radiation exposure predictions for short-duration stay Mars missions [AAS PAPER 92-107] p 277 A93-39261
- Performance consequences of automation-induced 'complacency' p 286 A93-39571
- Identification of hazardous awareness states in monitoring environments [SAE PAPER 921136] p 287 A93-41324
- Benefits, limitations, and guidelines for application of stereo 3-D display technology to the cockpit environment p 350 A93-44895
- The effects of history and predictive information on the ability of the transport aircraft pilot to predict an alert p 365 A93-46810
- Human-in-the-loop evaluation of RMS Active Damping Augmentation [AIAA PAPER 93-3875] p 393 A93-51460
- High level organizing principles for display of systems fault information for commercial flight crews p 388 A93-52187
- Human-centered automation and AI - Ideas, insights, and issues from the Intelligent Cockpit Aids research effort p 407 A93-52764
- Depth-viewing-volume increase by collimation of stereo 3-D displays p 407 A93-52915
- In-simulator assessment of trade-offs arising from mixture of color cuing and monocular, binocular, and stereopsis cuing information p 407 A93-52916
- Human factors evaluation of the HL-20 full-scale model p 409 A93-53746
- Human exposure to galactic cosmic rays in space p 410 A93-54887
- Katz model prediction of Caenorhabditis elegans mutagenesis on STS-42 [NASA-TM-4383] p 50 A93-13023
- The environmental control and life-support system for a lunar base: What drives its design p 66 A93-13991
- Conceptual design of a lunar base thermal control system p 68 A93-14003
- Target fragmentation in radiobiology [NASA-TM-4408] p 124 A93-18381
- EVA and telerobot interaction p 312 A93-27792
- Method of encouraging attention by correlating video game difficulty with attention level [NASA-CASE-LAR-15022-1] p 288 A93-28128
- National Aeronautics and Space Administration, Lewis Research Center, Cleveland, OH.**
- Optimal design of composite hip implants using NASA technology p 174 A93-22188
- A fiber optic probe for the detection of cataracts p 254 A93-25593
- Probabilistic simulation of the human factor in structural reliability p 365 A93-31573
- National Aeronautics and Space Administration, Marshall Space Flight Center, Huntsville, AL.**
- Microgravity flight testing of a laboratory robot [AAS PAPER 91-035] p 62 A93-15583
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 153 A93-28698
- Atomic structure and chemistry of human serum albumin p 200 A93-31628
- Structure of a human monoclonal antibody Fab fragment against gp41 of human immunodeficiency virus type 1 p 203 A93-32850
- Phase III Integrated Water Recovery Testing at MSFC - Closed hygiene and potable loop test results and lesson learned [SAE PAPER 921117] p 290 A93-41309
- Initial accomplishments of the Environmental Control and Life Support System (ECLSS) atmosphere revitalization (AR) predevelopment operational system test (POST) for the Space Station Freedom (SSF) [SAE PAPER 921186] p 294 A93-41365
- Aquatic biofilms and their responses to disinfection and invading species p 296 A93-41387
- Evaluation of the carbon dioxide removal assembly requirements for the Space Station Freedom in the Manned Tended Capability through Permanently Manned Capability configurations [SAE PAPER 921231] p 297 A93-41405
- Development of a test protocol for evaluating EVA glove performance [SAE PAPER 921254] p 298 A93-41424
- The analytical control program for the NASA Space Station Freedom Environmental Control and Life Support System (ECLSS) Water Recovery Test [SAE PAPER 921269] p 300 A93-41439
- Catalytic oxidation for treatment of ECLSS and PMMS waste streams [SAE PAPER 921274] p 301 A93-41443
- Biodegradation of materials in water reclamation systems [SAE PAPER 921311] p 303 A93-41473
- Determination of organic carbon and ionic accountability of various waste and product waters derived from ECLSS water recovery tests and Spacelab humidity condensate [SAE PAPER 921313] p 303 A93-41475
- Separation of rat pituitary secretory granules by continuous flow electrophoresis p 329 A93-44933
- Space Station Freedom payload operations in the 21st century p 350 A93-45436
- Physical and digital simulations for IVA robotics p 391 A93-49445
- Microbiological analysis of debris from STS-42 IML-1 by direct plating of rinse waters [NASA-TM-108375] p 6 A93-12174
- A study of the effects of micro-gravity on seed germination p 40 A93-13167
- Bar-holding prosthetic limb [NASA-CASE-MFS-28481-1] p 70 A93-14870
- Wheels for wheelchairs and the like [NASA-CASE-MFS-28632-1] p 106 A93-17042
- Portable seat lift [NASA-CASE-MFS-28610-1] p 106 A93-17045
- Bright light delivery system [NASA-CASE-MFS-28723-1] p 96 A93-17058
- Finite element analysis of a composite artificial ankle p 174 A93-22189
- Design of a portable powered seat lift p 195 A93-22190
- Environmental control and life support system p 311 A93-27718
- Environmental control and life support system evolution p 311 A93-27719
- The ECLSS advanced automation project evolution and technology assessment p 312 A93-27723
- Marshall Space Flight Center ECLSS technology activities p 312 A93-27724
- Man-systems integration and the man-machine interface p 313 A93-27795
- Environmental control and life support systems p 314 A93-27858
- Amino acid sequences for the binding regions in serum albumin proteins [NASA-CASE-MFS-28402-1] p 276 A93-28952
- Computerized atmospheric trace contaminant control simulation for manned spacecraft [NASA-TM-108409] p 321 A93-28977
- Process for selectively recovering algae and protozoa [NASA-CASE-MFS-26124-1-NPO] p 276 A93-29174
- Platform stair lift [NASA-CASE-MFS-28772-1] p 353 A93-29845
- Prosthetic elbow joint [NASA-CASE-MFS-28707-1] p 354 A93-30566
- National Aeronautics and Space Administration, Pasadena Office, CA.**
- Pseudomonas screening assay [NASA-CASE-NPO-17653-1-CU] p 245 A93-25994
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- Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 A93-27989
- Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 A93-28199
- Characterization and classification of strains of Francisella tularensis isolated in the central Asian focus of the Soviet Union and in Japan [FOA-B-40421-4.4] p 275 A93-28200
- Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia [FOA-B-40422-4.4] p 275 A93-28212
- Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment [FOA-A-40065-4.5] p 359 A93-32423
- National Highway Traffic Safety Administration, East Liberty, OH.**
- Upper interior head protection. Volume 1. The development of a research test procedure [PB93-113769] p 194 A93-21537
- Upper interior head protection. Volume 2: Fleet characterization and countermeasure evaluation [PB93-113777] p 195 A93-21795
- National Inst. of Health, Bethesda, MD.**
- Immunoconjugates: Magic bullets for cancer therapy? p 253 A93-25567
- National Science Foundation, Washington, DC.**
- Diversity in biological research [NSF-92-19] p 42 A93-13700
- Biomedical Polar Research Workshop Minutes [NASA-TM-108026] p 81 A93-16799
- Epidemiologic research in Antarctica p 81 A93-16800
- Exercise during long term exposure to space: Value of exercise during space exploration p 82 A93-16807
- National Space Development Agency, Ibaraki (Japan).**
- Study on environment control and life support technology p 149 A93-20413
- National Space Development Agency, Tokyo (Japan).**
- Conceptual study on manned lunar surface site p 316 A93-28029
- Naval Aerospace Medical Research Lab., Pensacola, FL.**
- The OMPAT level 1 Neurophysiological Performance Assessment Battery: NPPAB [AD-A258480] p 27 A93-12432
- Effects of dextromethamphetamine on subjective fatigue [AD-A258252] p 119 A93-17822
- An automated version of the dichotic listening test: Hardware, software, and procedural details [AD-A258114] p 120 A93-17895
- The detection of lateral motion by US Navy jet pilots [AD-A258115] p 120 A93-17896
- A review of models of the human temperature regulation system [AD-A258023] p 120 A93-17918
- The efficacy of biographical inventory data in predicting early attrition in naval aviation officer candidate training [AD-A258025] p 131 A93-17919
- Toward the ideal military aviation sunglass [AD-A258200] p 140 A93-18200
- An analysis of a sustained flight operation training mission in Navy attack aircraft [AD-A258199] p 131 A93-18205
- Aviation medicine research: A historical review [AD-A258198] p 121 A93-18217
- A computer-based visual analog scale [AD-A258152] p 122 A93-18280
- The unique contribution of selected personality tests to the prediction of success in naval pilot training [AD-A258144] p 132 A93-18291
- The effect of combat on the work/rest schedules and fatigue of A-6 and F-14 aviators during Operation Desert Shield/Storm [AD-A258146] p 122 A93-18292
- Using constraint satisfaction networks to study aircrew selection for advanced cockpits [AD-A258151] p 140 A93-18293
- The effect of combat on aircrew subjective readiness and LSO grades during Operation Desert Shield/Storm [AD-A258156] p 132 A93-18294
- Medical evaluation of spatial disorientation mishaps p 134 A93-19703
- Subjective fatigue in A-6, F-14, and F/A-18 aircrews during operations Desert Shield and Storm [AD-A259243] p 171 A93-20580
- The five-factor personality model and naval aviation candidates [AD-A260227] p 225 A93-24319
- Simulated sustained flight operations and performance. Part 1: Effects of fatigue [AD-A261012] p 266 A93-25859
- Naval Air Development Center, Warminster, PA.**
- Ventilation loss in the NASA Space Shuttle crew protective garments: Potential for heat stress [AD-A258552] p 148 A93-19955
- Naval Air Warfare Center, China Lake, CA.**
- Human factors problems for aircrew-aircraft interfaces: Where should we focus our efforts? p 144 A93-19759
- A systems approach to the advanced aircraft man-machine interface p 146 A93-19776
- Man-machine interface with simulated automatic target recognition systems p 147 A93-19781
- Adaptive autonomous target cue p 148 A93-19784

**Naval Air Warfare Center, Patuxent River, MD.**

Integration of exterior lighting systems and night vision imaging systems  
[AD-A254826] p 63 N93-12732

Abridged procedural guide to aircrew anthropometric accommodation assessment  
[AD-A265220] p 366 N93-32006

**Naval Air Warfare Center, Warminster, PA.**

Effectiveness of NASA 1032 and 1035 and Air Force 1030 and 1034 units in protection against cold water hypothermia  
[AD-A255120] p 34 N93-12291

Human performance in complex task environments: A basis for the application of adaptive automation  
[AD-A255067] p 35 N93-12486

Statistical analysis of the human strangulation experiments: Comparison to Gz-induced loss of consciousness  
[AD-A255485] p 54 N93-14789

The effects of display and response codes on information processing in an identification task  
[AD-A259531] p 234 N93-23451

**Naval Command, Control and Ocean Surveillance Center, Kailua, HI.**

TeleOperator/telePresence System (TOPS) Concept Verification Model (CVM) development  
[AD-A259531] p 367 N93-32112

**Naval Command, Control and Ocean Surveillance Center, San Diego, CA.**

Operator Performance Support System (OPSS)  
[AD-A259531] p 196 N93-22195

A simple computational model of center-surround receptive fields in the retina  
[AD-A264723] p 336 N93-30515

An algorithm for simple and complex feature detection: From retina to primary visual cortex  
[AD-A264306] p 337 N93-30897

**Naval Health Research Center, San Diego, CA.**

Smoking status and body composition, exercise, dietary intake, and alcohol/caffeine consumption  
[AD-A250648] p 23 N93-11893

Sleep inertia: Is there a worst time to wake up?  
[AD-A256602] p 52 N93-14240

Muscle glycogen, fiber type, aerobic fitness, and anaerobic capacity of West Coast US Navy Sea-Air-Land personnel (SEALs)  
[AD-A258364] p 121 N93-18209

The US Navy Healthy Back Program: Effect on back knowledge among recruits  
[AD-A258368] p 121 N93-18210

Combined strength and endurance training: Functional and morphological adaptations to ten weeks of training  
[AD-A261059] p 267 N93-26229

**Naval Medical Research and Development Command, Bethesda, MD.**

Behavioral effects of high peak power microwave pulses: Head exposure at 1.3 GHz  
[AD-A258136] p 120 N93-17985

**Naval Medical Research Inst., Bethesda, MD.**

Statistically based decompression tables 8: Linear-exponential kinetics  
[AD-A257613] p 120 N93-17926

An assessment of peripheral nerve damage in the rat following non-freezing cold exposure: An electrophysiological and histopathological examination  
[AD-A264293] p 331 N93-30818

Hydrogen-rated system for in vitro studies at pressure: Operating procedures and emergency procedures  
[AD-A264179] p 336 N93-30882

**Naval Postgraduate School, Monterey, CA.**

Modeling of a full vision system using combined Visual/Haptic search for remote object identification  
[AD-A260977] p 266 N93-25867

Performance measurement systems: A best practices study  
[AD-A262180] p 350 N93-29444

**Naval Research Lab., Washington, DC.**

Direct manipulation and intermittent automation in advanced cockpits  
[AD-A253814] p 32 N93-11784

**Naval Submarine Medical Research Lab., Groton, CT.**

Statistically based decompression tables 7: Selection and treatment of primary air and N2O2 data  
[AD-A259090] p 172 N93-20587

Conspicuity of aids to navigation. Part 1: Temporal patterns for flashing lights  
[AD-A264626] p 341 N93-30426

**Naval Undersea Warfare Center, New London, CT.**

Stimulus presentation formats and measurement techniques for the quantification of target detection performance  
[AD-A258933] p 133 N93-19449

**Navy Hospital, La Spezia (Italy).**

In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automated enzyme immunoassay method to dose specific IgE  
[AD-A261438] p 21 N93-11314

**Nebraska Univ., Lincoln.**

Investigation of the effects of Extra Vehicular Activity (EVA) and Launch and Entry (LES) gloves on performance  
[AD-A261438] p 266 N93-26061

**New Hampshire Univ., Durham.**

Receptor and neural aliasing  
[AD-A261438] p 261 N93-26489

**New Orleans Univ., LA.**

A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration  
[AD-A261438] p 143 N93-19672

**New York Medical Coll., NY.**

Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A264829] p 336 N93-30613

**New York Univ., New York.**

Neuromagnetic investigations of cortical regions underlying short-term memory  
[AD-A255788] p 58 N93-14646

Cognition and the brain  
[AD-A255483] p 59 N93-14788

Biophysical and biochemical mechanisms in synaptic transmitter release  
[AD-A256340] p 55 N93-15198

Higher order mechanisms of color vision  
[AD-A256369] p 60 N93-15329

Facilitation and interference in identification of pictures and words  
[AD-A261484] p 260 N93-26356

Duration of alpha suppression increases with angle in a mental rotation task  
[AD-A261592] p 260 N93-26435

Imaging regional changes in the spontaneous activity of the brain: An extension of the minimum-norm least-squares estimate  
[AD-A261593] p 260 N93-26436

Neuromagnetic investigation of cortical regions underlying short-term memory  
[AD-A261445] p 261 N93-26521

**New York Univ. Medical Center.**

Computing with neural maps: Application to perceptual and cognitive function  
[AD-A264056] p 341 N93-30033

**Nippon Electric Co. Ltd., Tokyo (Japan).**

Conceptual study of manned lunar surface site  
[AD-A261592] p 316 N93-28031

**North Carolina Agricultural and Technical State Univ., Greensboro.**

Modeling human response errors in synthetic flight simulator domain  
[AD-A253808] p 141 N93-19464

Modeling the performance of the human (pilot) interaction in a synthetic flight domain: Information theoretic approach  
[AD-A253808] p 141 N93-19465

Recognition of partially occluded threat objects using the annealed Hopfield network  
[AD-A253808] p 142 N93-19466

**North Carolina Univ., Chapel Hill.**

Advanced technology for portable personal visualization  
[AD-A253808] p 32 N93-11783

Auditory spectro-temporal pattern analysis  
[AD-A264691] p 361 N93-31981

**North Dakota Univ., Grand Forks.**

Plasma reactor waste management systems  
[AD-A264691] p 68 N93-14000

Distribution of human waste samples in relation to sizing waste processing in space  
[AD-A264691] p 68 N93-14001

The province and heritage of mankind reconsidered: A new beginning  
[AD-A264691] p 69 N93-14018

**Nottingham Univ. (England).**

Development of Arabidopsis thaliana grown under microgravity conditions  
[AD-A264691] p 211 N93-24404

**Oak Ridge Associated Universities, Inc., TN.**

Health effects of low-frequency electric and magnetic fields  
[DE93-005675] p 127 N93-19838

**Oak Ridge National Lab., TN.**

Scaling issues for biodiversity protection  
[DE92-016689] p 6 N93-12315

Initial experiments with a myoelectric-based muscle sensor  
[DE92-016034] p 237 N93-25099

Kinetic studies of interfacial photocurrents in platinized chloroplasts  
[DE93-002344] p 211 N93-25104

Human factors engineering: A key element of instrumentation and control system design  
[DE93-006731] p 264 N93-25415

Development of resonance ionization spectroscopy for genome mapping and DNA sequencing using stable isotopes as DNA labels  
[DE93-007815] p 246 N93-26587

Introductions to the Proceedings of the Fourteenth Symposium on Biotechnology for Fuels and Chemicals  
[DE93-006235] p 276 N93-28890

**Observatoire de Paris-Meudon (France).**

SETI in Europe  
[DE93-006235] p 237 N93-23908

**Oesterreichisches Forschungszentrum Seibersdorf**

G.m.b.H., Vienna.  
Influence of microgravity on immune system and genetic information  
[DE93-006235] p 220 N93-24370

Office of Space Science and Applications, Washington, DC.  
STS-40 Spacelab Life Sciences 1 (SLS-1): The first dedicated spacelab life sciences mission  
[NASA-TM-108034] p 80 N93-15823

Space radiation health program plan  
[NASA-TM-108036] p 123 N93-18375

**Ohio State Univ., Columbus.**

Demodulation processes in auditory perception  
[AD-A255748] p 54 N93-15053

Cognitive and affective components of mental workload: Understanding the effects of each on human decision making behavior  
[AD-A255748] p 99 N93-16783

<sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin  
[AD-A262979] p 284 N93-28293

Regulation of alternative CO<sub>2</sub> fixation pathways in prokaryotic and eucaryotic photosynthetic organisms  
[DE93-012109] p 276 N93-29181

**Ohio Wesleyan Univ., Delaware.**

Analysis of retinal function following laser irradiation  
[AD-A255649] p 52 N93-14163

**Oklahoma State Univ., Stillwater.**

Final results of space exposed experiment developed for students  
[AD-A255649] p 329 N93-29702

**Omega Aerospace, Inc., Virginia Beach, VA.**

An on-orbit viewpoint of life sciences research  
[AD-A255649] p 206 N93-22629

**Orbital Technologies Corp., Madison, WI.**

1991 NASA Life Support Systems Analysis workshop  
[NASA-CR-4466] p 310 N93-27100

1992 NASA Life Support Systems Analysis workshop  
[NASA-CR-4467] p 310 N93-27101

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Joint HVAC transmission EMF environmental study  
[DE92-017863] p 43 N93-15211

Joint HVAC transmission EMF environmental study  
[DE92-017863] p 43 N93-15211

Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek, Delft (Netherlands).

Occupant simulation as an aspect of flight safety research  
[DE92-017863] p 142 N93-19665

A body mass measurement device based on the oscillation principle  
[DE92-017863] p 221 N93-24400

An automated processing system for food frequency and nutrition knowledge questionnaire  
[DE92-017863] p 367 N93-32241

**Oslo Univ. (Norway).**

Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position  
[DE92-017863] p 368 N93-32243

**Oxford Univ. (England).**

Formal aspects of human-computer interaction  
[DE92-017863] p 66 N93-13909

A modular head/eye platform for real-time reactive vision  
[OUEL-1941/92] p 320 N93-28897

P

**Pacific Northwest Lab., Richland, WA.**

Radiation damage to DNA  
[DE92-015760] p 5 N93-10834

Human perceptual deficits as factors in computer interface test and evaluation  
[DE92-019124] p 63 N93-12712

**Paris V Univ. (France).**

Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus  
[DE92-019124] p 127 N93-19707

**Paris VI Univ. (France).**

Gravity and root morphogenesis  
[DE92-019124] p 210 N93-24403

**Park Seed Co., Inc., Greenwood, SC.**

Continued results of the seeds in space experiment  
[DE92-019124] p 330 N93-29703

**Pennsylvania State Univ., University Park.**

Commercial opportunities in bioseparations and physiological testing aboard Space Station Freedom  
[DE92-019124] p 206 N93-22649



The role of pyridoxine as a countermeasure for in-flight loss of lean body mass p 255 N93-26068  
Electrophoretic separation of cells and particles from rat pituitary and rat spleen p 276 N93-28415  
[NASA-CR-193073]

**Pennsylvania Univ., Philadelphia.**

Computer simulations of object discrimination by visual cortex [AD-A253345] p 12 N93-10271  
Modeling clothed figures [AD-A257037] p 71 N93-15363  
The dynamics of visual representation, attention, encoding, and retrieval processes [AD-A264674] p 342 N93-30543

**Pilkington P.E. Ltd., Saint Asaph (Wales).**

Multi-function visor p 146 N93-19770

**Pittsburgh Univ., PA.**

Organization of the human circadian system [AD-A264675] p 361 N93-32015

**Politecnico di Milano (Italy).**

Ontology of mind, subjective ontology, and the example of temporal expressions [REPT-92-018] p 26 N93-11212

**Portland State Univ., OR.**

Joint HVAC transmission EMF environmental study [DE92-017863] p 43 N93-15211

**Portuguese Air Force, Alfragide.**

Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force p 369 N93-32255

**Prairie View Agricultural and Mechanical Coll., TX.**

Mars habitat p 352 N93-29747

**President's Council of Advisors on Science and Technology, Washington, DC.**

Achieving the promise of the bioscience revolution: The role of the Federal Government [PB93-139970] p 244 N93-25457

**Princeton Univ., NJ.**

Physiological analyses of the afferents controlling brain neurochemical systems [AD-A253185] p 14 N93-11146

**Programming and Systems Management, Inc., Dayton, OH.**

An innovative method for hand protection from extreme cold using heat pipe [AD-A259720] p 235 N93-24128

**Puerto Rico Univ., Rio Piedras.**

Selenia: A habitability study for the development of a third generation lunar base p 352 N93-29748

**Purdue Univ., West Lafayette, IN.**

Development of physical and mathematical models for the Porous Ceramic Tube Plant Nutritation System (PCTPNS) [NASA-TM-107551] p 4 N93-10085  
Visual psychophysics of egomotion [AD-A248349] p 26 N93-11488

**Q**

**Queens Medical Centre, Nottingham (England).**

Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663  
Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664

**R**

**Red Cross Hospital, The Hague (Netherlands)**

Phadiatop: A screening test for inhalant allergy p 21 N93-11313

**Regie RENAULT, Nanterre (France).**

Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 N93-19708

**Research Inst. for Computing and Information Systems, Houston, TX.**

Mission and Safety Critical (MASC): An EVACS simulation with nested transactions [NASA-CR-192295] p 149 N93-20314

**Research Triangle Inst., Research Triangle Park, NC.**

Survey of protocols for conducting indoor air quality investigations in large buildings [PB93-119865] p 194 N93-21215

**Retina Foundation, Boston, MA.**

Perception of lightness and brightness in complex patterns [AD-A254093] p 25 N93-10658

**Reynolds (K. H.), McLean, VA.**

Preliminary design study of lunar housing configurations p 106 N93-17443

**Rice Univ., Houston, TX.**

Simulation of excitatory/inhibitory interactions in single auditory neurons [AD-A253614] p 50 N93-13252  
Comparing performance on implicit memory tests [AD-A258168] p 131 N93-17921

**Rochester Univ., NY.**

The perception of articulated motion: Recognizing moving light displays [AD-A256046] p 59 N93-14660

**Rockefeller Univ., New York, NY.**

Carboxyalkylated hemoglobin as a potential blood substitute [AD-A252329] p 22 N93-11561

**Rockwell International Corp., Los Angeles, CA.**

Virtual interface applications for airborne weapons systems p 318 N93-28858  
Requirements for pilot assistance in a thrust-vectoring combat aircraft p 320 N93-28870

**Rome Lab., Griffiss AFB, NY.**

Time stress measurement devices for enhancement of onboard bit performance p 144 N93-19762

**Rome Univ. (Italy).**

Silent HIV infection p 16 N93-11293  
Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962  
Constraints on learning in dynamic synapses [PREPRINT-890] p 100 N93-17026  
Effective neurons and attractor neural networks in cortical environment [PREPRINT-829] p 82 N93-17214

**Royal Air Force, Farnborough (England).**

Management of avionics data in the cockpit p 147 N93-19777

**Royal Air Force Central Medical Establishment, London (England).**

Blood lipids in aircrew recruits and in RAF aviators p 362 N93-32251

**Royal Air Force Inst. of Aviation Medicine, Farnborough (England).**

The physiological limitations of man in the high G environment p 319 N93-28861  
Operator and automation capability analysis: Picking the right team p 319 N93-28864  
Royal Aircraft Establishment, Farnborough (England). The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769

**Royal Netherlands Air Force, Volkel.**

The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671

**Royal Norwegian Air Force, Oslo.**

Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 N93-32261

**Royal Signals and Radar Establishment, Malvern (England).**

An introduction to the information processing components of the brain [RSRE-MEMO-4350] p 25 N93-10979

**Ruhr Univ., Bochum (Germany).**

CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 N93-24401  
Ecosystems on Earth and in space (the possible utilization of artificial ecosystems for space life support systems) p 236 N93-24406

**Rutgers - The State Univ., New Brunswick, NJ.**

Eye movements and visual information processing [AD-A250198] p 24 N93-10278  
Eye movements and visual information processing [AD-A259955] p 225 N93-24297

**S**

**Saint Louis Univ., MO.**

Carbon monoxide exposure of subjects with documented cardiac arrhythmias [PB93-179943] p 337 N93-30890

**SAM Technology, Inc., San Francisco, CA.**

Mental workload assessment in the cockpit: Feasibility of using electrophysiological measurements, phase 1 [AD-A254138] p 25 N93-10662  
Physiological indices of mental workload [AD-A261692] p 260 N93-26391

**Sandia National Labs., Albuquerque, NM.**

Application of RADTRAN to estimation of doses to persons in enclosed spaces [DE93-000758] p 97 N93-17230  
Treatment of human-computer interface in a decision support system [DE93-002281] p 237 N93-24502  
A heat transfer analysis of a mobile vehicle radiation-shielded operator compartment [DE93-007428] p 264 N93-25318

A robust model for finding optimal evolutionary trees [DE93-010682] p 330 N93-30483

**Santa Clara Univ., CA.**

The solar system: Importance of research to the biological sciences p 113 N93-18547

**Schmitt (Harrison H.), Albuquerque, NM.**

The real world and lunar base activation scenarios p 68 N93-14014

**Science Applications International Corp., McLean, VA.**

Predicting radiation induced performance decrements of AH-1 helicopter crews. Volume 2: Evaluation of modeling and simulation techniques for predicting radiation induced performance decrements [AD-A262872] p 351 N93-29484

**Sclavo Research Center, Rome (Italy).**

Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302

**Sclavo S.p.A., Sienna (Italy).**

Studies of safety, infectivity, and immunogenicity of a new Temperature Sensitive (TS) 51-1 strain of S. typhi as a new live oral typhoid fever vaccine candidate p 19 N93-11306

**Scripps Clinic and Research Foundation, La Jolla, CA.**

Molecular approach to hypothalamic rhythms [AD-A264438] p 335 N93-30421

**Search Technology, Inc., Norcross, GA.**

Modeling the dynamics of mental workload and human performance in complex systems [AD-A258553] p 135 N93-19956

**Service de Medecine Aeronautique, Versailles (France).**

Lipodystrophies in the French military flight crew p 362 N93-32249

**Sextant Avionique, Saint Medard en Jalles (France).**

Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 N93-19681

**Sextant Avionique, Valence (France).**

Multimodal dialog system for future cockpits p 146 N93-19773

G-load effects and efficient acoustic parameters for robust speaker recognition p 146 N93-19775

**Simon Fraser Univ., Burnaby (British Columbia).**

Modelling and simulation of human retinal vision processing p 335 N93-30269

**Simula, Inc., Phoenix, AZ.**

Improving manikin bioidentity p 142 N93-19668

**Smith-Kettlewell Inst. of Visual Sciences, San Francisco, CA.**

Visual processing of object velocity and acceleration [AD-A261048] p 265 N93-25778

**Smiths Industries Ltd., Bishops Cleeve (England).**

Model-based reasoning applied to cockpit warning systems p 147 N93-19778

**Southwest Research Inst., San Antonio, TX.**

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 2 [DE92-040153] p 41 N93-13503

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates, part 1 [DE92-040152] p 41 N93-13520

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates: Neuroendocrine portion of Experiment 4 [DE92-040955] p 95 N93-16166

Effects of 60-Hz electric and magnetic fields on operant and social behavior and on neuroendocrine system of nonhuman primates p 207 N93-22913

Investigation of effects of 60-Hz electric and magnetic fields on operant and social behavior and on the neuroendocrine system of nonhuman primates [DE93-007678] p 211 N93-24455

**Spanish Air Force, Talavera AFB.**

An epidemiological study in SAF's pilots ejections p 143 N93-19699

Trial of emergency ration of the Spanish Air Force p 368 N93-32247

Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots p 369 N93-32258

**Spectra Research Systems, Inc., Huntsville, AL.**

ECLSS evolution: Advanced instrumentation interface requirements. Volume 3: Appendix C [NASA-CR-184367] p 64 N93-12990

Advanced life support study. Modification 10: ECLSS logistical support analysis for Space Station Freedom [NASA-CR-192481] p 266 N93-25888

**SRI International Corp., Menlo Park, CA.**

Interpretation as abduction [AD-A259608] p 225 N93-24227

**ST Systems Corp., Lanham, MD.**

Operator vision aids for space teleoperation assembly and servicing p 33 N93-11981

**Stanford Univ., CA.**

Anaerobic microbial transformation of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and halogenated solvents p 42 N93-14557

Spontaneous discovery and use of categorical structure [AD-A261658] p 260 N93-26364

Visualization techniques for analyzing control of human movement: Affine mappings between multi-dimensional spaces p 353 N93-30204

**State Univ. of New York, Buffalo.**

Effect of cytoskeletal reagents on stretch activated ion channels [AD-A261089] p 245 N93-25764

**State Univ. of New York, Stony Brook.**

Training, muscle fatigue and stress fractures [AD-A255277] p 54 N93-15006

**State Univ. of North Texas, Denton.**

Life support and self-sufficiency in space communities p 105 N93-16866

**State Univ. of Western Connecticut, Danbury.**

The challenge of biodegradation for screening persons carrying explosives p 159 N93-21931

**Sverdrup Technology, Inc., Huntsville, AL.**

Microbiological test results of the environmental control and life support systems vapors compression distillation subsystem recycle tank components following various pretreatment protocols [NASA-CR-192570] p 359 N93-32354

Microbiological and corrosion analysis of three urine pretreatment regimes with titanium 6Al-4V [NASA-CR-192575] p 372 N93-32356

Optimization of 15 parameters influencing the long-term survival of bacteria in aquatic systems [NASA-CR-192571] p 359 N93-32365

**T****Technical Research Centre of Finland, Espoo.**

Correlation of results of radiant heat test and convective heat test for three layered protective clothing p 194 N93-21161

Biotechnical production and use of pyruvic acid with special reference to coenzyme regeneration [VTT-PUBS-77] p 209 N93-23369

**Technico Southwest, Inc., Los Alamos, NM.**

The effect of pain on task performance: A review of the literature [AD-A254336] p 59 N93-15216

**Technion - Israel Inst. of Tech., Haifa.**

Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

**Technische Univ., Berlin (Germany).**

DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field [ETN-93-93799] p 284 N93-28469

**Technische Univ., Graz (Austria).**

Monitoring of cardiovascular parameters during the AustroMir space flight p 220 N93-24367

**Technische Univ., Twente (Netherlands).**

Engineering the visibility of small features on electronic flight displays p 144 N93-19758

**Technische Univ., Vienna (Austria).**

Optovet: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 N93-24366

**Telefunken System Technik G.m.b.H., Wedel (Germany).**

Advanced cockpit-mission and image management p 144 N93-19760

**Tennessee Univ., Knoxville.**

Biofilm ecology of bioluminescent bacteria [AD-A255282] p 42 N93-14532

**Texas A&M Univ., College Station.**

A linear, time-varying simulation of the respiratory tract system [DE93-004515] p 218 N93-24009

Alternative processes for water reclamation and solid waste processing in a physical/chemical bioregenerative life support system p 311 N93-27721

Growing wheat to maturity in reduced gas pressures [NASA-CR-193245] p 277 N93-29216

Melatonin, the pineal gland, and circadian rhythms [AD-A264099] p 337 N93-31061

**Texas Technological Univ., Lubbock.**

Human capabilities and limitations in situation awareness p 319 N93-28863

**Texas Univ., Austin.**

Design of a radiator shade for testing in a simulated lunar environment [NASA-CR-192080] p 108 N93-17710

Design of a resistive exercise device for use on the Space Shuttle [NASA-CR-192079] p 108 N93-17805

Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192078] p 108 N93-17806

Design of a vibration isolation system for a cycle ergometer to be used onboard the Space Shuttle [NASA-CR-192021] p 138 N93-17970

Design of a reusable kinetic energy absorber for an astronaut safety tether to be used during extravehicular activities on the Space Station [NASA-CR-192015] p 139 N93-17973

Conceptual design of a fleet of autonomous regolith throwing devices for radiation shielding of lunar habitats [NASA-CR-192030] p 139 N93-18018

Preliminary design of a radiator shading device for a lunar outpost [NASA-CR-192016] p 139 N93-18019

Conceptual design of a thermal control system for an inflatable lunar habitat module [NASA-CR-192014] p 140 N93-18113

SHARC: Space Habitat, Assembly and Repair Center [NASA-CR-192031] p 140 N93-18153

**Texas Univ., Houston.**

Analysis and synthesis of adaptive neural elements and assemblies [AD-A259954] p 219 N93-24247

<sup>13</sup>C NMR spectra of allosteric effectors of hemoglobin [AD-A262979] p 284 N93-28293

**Texas Univ., San Antonio.**

Proceedings of Workshop 1: The Human Brainmap Database [AD-A260720] p 258 N93-25654

Analysis of visual loss from retinal lesions [AD-A264692] p 336 N93-30494

**Texas Univ. Health Science Center, San Antonio.**

Investigation of laser-induced retinal damage [AD-A264096] p 338 N93-31094

**Tokyo Univ., Sagami (Japan).**

Japanese treefrog experiment onboard the Space Station Mir p 210 N93-24402

**Trinity Univ., San Antonio, TX.**

Effects of space radiation on humoral and cellular immunity in rhesus monkeys [AD-A261808] p 246 N93-26259

**Trondheim Univ. (Norway).**

The USO-concept applied to a biological model experiment p 210 N93-24379

**Turin Univ. (Italy).**

Clinical types of Hepatitis B p 15 N93-11286

**Tuskegee Inst., AL.**

Annual report [NASA-CR-191389] p 105 N93-16840

**U****Umea Univ. (Sweden).**

Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 N93-28199

**Umpqua Research Co., Myrtle Creek, OR.**

Regenerable biocide delivery unit, volume 1 [NASA-CR-185701-VOL-1] p 274 N93-27122

Regenerable biocide delivery unit, volume 2 [NASA-CR-185701-VOL-2] p 275 N93-27360

**United Technologies Corp., Farmington, CT.**

SPE water electrolyzers in support of the lunar outpost p 315 N93-27977

**Universitaet der Bundeswehr Muenchen, Neubiberg (Germany).**

Monitoring of pilot actions as part of a knowledge-based system for pilot assistance p 59 N93-15184

Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 N93-28855

**University City Science Center, Philadelphia, PA.**

Investigation of wheat coleoptile response to phototropic stimulations [NASA-CR-192157] p 114 N93-18608

A proposal to determine properties of the gravitropic response of plants in the absence of a complicating g-force (GTHRES) [NASA-CR-192219] p 114 N93-19377

**University of Central Florida, Orlando.**

Chemical characterization of some aqueous leachates from crop residues in 'CELSS' p 115 N93-19399

**University of Northern Arizona, Flagstaff.**

Effects of early bright, late bright and dim illumination upon circadian neuroendocrine, electrophysiological and behavioral responses [AD-A254129] p 13 N93-10661

**University of South Florida, Tampa.**

Digital mammography, cancer screening: Factors important for image compression p 221 N93-24551

Nutritional assessment of United States tactical air command pilots p 367 N93-32242

**University of Western Illinois, Macomb.**

Analysis of the lettuce data from the variable pressure growth chamber at NASA Johnson Space Center: A three-stage nested design model p 245 N93-26069

**Utah Univ., Salt Lake City.**

Sudden loading and fatigue effects on the human spine [PB93-167526] p 286 N93-29199

**Utrecht State Univ. (Netherlands).**

Two strikes against perfect phylogeny [RUU-CS-92-08] p 157 N93-20848

**V****Vanderbilt Univ., Nashville, TN.**

Bone loss and human adaptation to lunar gravity p 51 N93-14002

**EVA Glove Research Team**

[NASA-CR-193014] p 313 N93-27847

A feasibility study of hand kinematics for EVA analysis using magnetic resonance imaging p 313 N93-27848

A preliminary structural analysis of space-based inflatable tubular frame structures p 313 N93-27849

Power assist EVA glove development p 314 N93-27850

The AFOSR Workshop on the Future of EEG and MEG [AD-A264338] p 335 N93-30160

**Vector Research, Inc., Arlington, VA.**

Requirements for an automated human factors, manpower, personnel, and training (HMPPT) planning tool [AD-A258531] p 195 N93-21753

**Versar, Inc., Springfield, VA.**

Dermal exposure assessment: Principles and applications [PB92-205665] p 12 N93-10438

**Veterans Administration Hospital, San Francisco, CA.**

Secondary injury factors and preventative treatment [PB93-176014] p 283 N93-27409

**Virginia Univ., Charlottesville.**

Control and circadian behavior by transplanted suprachiasmatic nuclei [AD-A264553] p 335 N93-30382

Photoreceptors regulating circadian behavior: A mouse model [AD-A264881] p 337 N93-30908

**W****Wake Forest Univ., Winston-Salem, NC.**

Multiple neuron recording in the hippocampus of freely moving animals [AD-A264807] p 330 N93-30594

**Walt Disney World Co., Lake Buena Vista, FL.**

Lunar base CELSS: A bioregenerative approach p 67 N93-13993

**Walter Reed Army Inst. of Research, Washington, DC.**

Walter Reed Army Institute of Research biannual report [AD-A255630] p 52 N93-14162

**Walter Reed Army Medical Center, Washington, DC.**

AIDS/HIV in the US Military p 16 N93-11291

Use of novel adjuvants and delivery systems to improve the humoral and cellular immune response to malaria vaccine candidate antigens p 20 N93-11308

**Washington Univ., Saint Louis, MO.**

Hydrothermal organic synthesis experiments [NASA-CR-191257] p 41 N93-13457

Human safety in the lunar environment p 105 N93-16867

Enhanced performance using physiological feedback [AD-A258006] p 130 N93-17816

**Waterloo Univ. (Ontario).**

Respiratory response to varying degrees of tilt and lower body negative pressure p 173 N93-21114

**Wien Univ. (Austria).**

Development and implementation of the MotoMir experiment on the Mir Space Station p 220 N93-24363

**Wisconsin Univ., Madison.**

Potential of derived lunar volatiles for life support p 67 N93-13998

X Ray System, Lightweight Medical (XRLSM) [AD-A258159] p 123 N93-18295

**Wisconsin Univ., Milwaukee.**

Pax permanent Martian base: Space architecture for the first human habitation on Mars, volume 5 [NASA-CR-192042] p 140 N93-18156

## **Woods Hole Oceanographic Inst.**

CORPORATE SOURCE

Planetary Biology and Microbial Ecology: Molecular Ecology and the Global Nitrogen cycle  
[NASA-CR-4497] p 269 N93-26157  
GENESIS 2: Advanced lunar outpost  
p 352 N93-29760

### **Woods Hole Oceanographic Inst., MA.**

Marine microbial production of dimethylsulfide from dissolved dimethylsulfoniopropionate  
[NASA-CR-193278] p 330 N93-30665

### **World Health Organization, Geneva (Switzerland).**

HIV infection in the nineties p 15 N93-11290  
Communicable diseases: A major burden of morbidity and mortality p 18 N93-11300  
Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems  
p 20 N93-11310

### **Wright Lab., Wright-Patterson AFB, OH.**

The human-electronic crew: Is the team maturing? The 2nd Joint GAF/RAF/USAF Workshop on Human-Electronic Crew Teamwork  
[AD-A256192] p 69 N93-14520  
System automation and pilot-vehicle-interface for unconstrained low-altitude night attack  
p 320 N93-28867

### **Wright Research Development Center, Wright-Patterson AFB, OH.**

Panoramic cockpit displays p 145 N93-19765

### **Wright State Univ., Dayton, OH.**

Perception/action: An holistic approach  
[AD-A259597] p 235 N93-24067

### **Wyle Labs., Inc., Huntsville, AL.**

Increased fire and toxic contaminant detection responsibility by use of distributed, aspirating sensors  
p 311 N93-27722

### **Wyoming Univ., Laramie.**

A vision system planner for increasing the autonomy of the Extravehicular Activity Helper/Retriever  
[NASA-CR-193301] p 365 N93-31844

## **Y**

### **Yale Univ., New Haven, CT.**

Representations of shape in object recognition and long-term visual memory  
[AD-A264342] p 341 N93-30163

### **York Univ. (Ontario).**

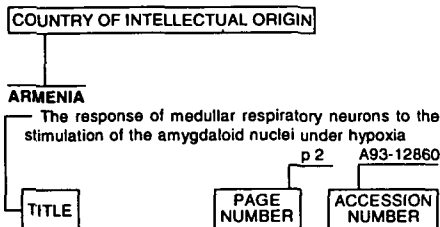
Aimed arm movements under changed gravity  
p 193 N93-21113  
Sensory sensitivities and discriminations and their roles in aviation  
[AD-A259742] p 224 N93-23479

## **Z**

### **Zurich Univ. (Switzerland).**

Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations p 15 N93-11288  
Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population  
p 19 N93-11307

### Typical Foreign Technology Index Listing



Listings in this index are arranged alphabetically by country of intellectual origin. The title of the document is used to provide a brief description of the subject matter. The page number and accession number are included in each entry to assist the user in locating the abstract in the abstract section. If applicable, a report number is also included as an aid in identifying the document.

## A

### ARMENIA

The response of medullary respiratory neurons to the stimulation of the amygdaloid nuclei under hypoxia p 2 A93-12860

The effect of cortical vestibular area stimulation on the activity of the neurons of lateral vestibular nuclei during vibration p 2 A93-12863

### AUSTRALIA

Cometary supply of terrestrial organics - Lessons from the K/T and the present epoch p 109 A93-17981  
Increased normoxic ventilation induced by repetitive hypoxia in conscious dogs p 79 A93-20037

Preservation of biological information in thermal spring deposits - Developing a strategy for the search for fossil life on Mars p 197 A93-28377

Membrane technology: A search for membranes for submarine atmosphere control p 266 A93-25904  
JAD-A260581

The Thirteenth AINSE Radiation Biology Conference: Conference handbook p 338 A93-31225  
DE93-609131

### AUSTRIA

COGIMIR - A study of cognitive functions in microgravity p 174 A93-26569

AUDIMIR - Directional hearing at microgravity p 159 A93-26570

OPTOVERT: An AUSTROMIR 91 experiment - Orientational effects from optokinetic stimulation p 159 A93-26571

Influence of microgravity on immune system and genetic information p 160 A93-26572

Effect of head-down bedrest on blood/plasma density after intravenous fluid load p 163 A93-28687

Nucleotide-protectable labeling of sulfhydryl groups in subunit I of the ATPase from Halobacterium saccharovorum p 201 A93-32116

Comparison of membrane ATPases from extreme halophiles isolated from ancient salt deposits p 243 A93-36557

Evaporation cycle experiments - A simulation of salt-induced peptide synthesis under possible prebiotic conditions p 354 A93-43792

Space and cognition - The measurement of behavioral functions during a 6-day space mission p 405 A93-55164

Group II intron RNA catalysis of progressive nucleotide insertion - A model for RNA editing p 398 A93-55292

Format and structure of a database on health and environmental impacts of different energy systems for electricity generation p 12 A93-10222

Eye-head-arm coordination and spinal reflexes in weightlessness p 236 A93-24362

Development and implementation of the MotoMir experiment on the Mir Space Station p 220 A93-24363

Optovert: An AustroMir-1991 experiment. Orientational effects from optokinetic stimulation p 226 A93-24366

Monitoring of cardiovascular parameters during the AustroMir space flight p 220 A93-24367

Influence of microgravity on immune system and genetic information p 220 A93-24370

## B

### BELGIUM

Mechanisms of improved arterial oxygenation after peripheral chemoreceptor stimulation during hypoxic exercise p 331 A93-42188

Allergy screening and follow-up in student pilots of the Belgian Air Force (BAF) p 21 A93-11316

Cognitive factors in the air events of the Air Force during the last decade p 134 A93-19682

The use of voice processing for some aspects of the pilot-vehicle-interface in an aircraft p 146 A93-19772

### BRAZIL

Chiral-symmetry-breaking in nonequilibrium chemical systems - The racemization influence p 269 A93-36563

Utilization of high energy electron beam in the treatment of drinking and waste water p 372 A93-32406  
DE92-642335

### BULGARIA

Sleep as a restorative process under extreme conditions p 89 A93-18291

Electromyographic investigations of tremor in aquanauts in simulated immersions p 90 A93-18292

Moistening of the substrate in microgravity p 135 A93-21906

Dynamics of the controlled environment conditions in 'SVET' greenhouse in flight p 152 A93-27460

Some proteins keep 'living fossil' pre-sequence p 244 A93-36562

The first 'space' vegetables have been grown in the 'SVET' greenhouse using controlled environmental conditions p 394 A93-52410

### BYELARUS

The role of serotonin and histamine in increasing the resistance of the organism to certain extreme conditions p 324 A93-43034

## C

### CANADA

Subjective and behavioral effects associated with repeated exposure to narcosis p 7 A93-10327

A second postcooling afterdrop - More evidence for a convective mechanism p 44 A93-14969

The effects of hypoxia on auditory reaction time and P300 latency p 47 A93-16156

Accuracy of aimed arm movements in changed gravity p 56 A93-16159

Cerebral blood flow velocities by transcranial Doppler during parabolic flight p 84 A93-17533

Alterations of proprioceptive function in the weightless environment p 86 A93-17549

Decrement in manual arm performance during whole body cooling p 88 A93-18038

The Canadian forces airsickness rehabilitation program, 1981-1991 p 89 A93-18042

Collision avoidance of a multiple degree of redundancy manipulator operating through a window p 136 A93-23846

Simulator sickness experience in simulators equipped with fiber optic helmet mounted display systems p 136 A93-24490  
[AIAA PAPER 92-4135]

The effects of variations in the anti-G straining maneuver on blood pressure at +Gz acceleration p 118 A93-25204

Study design for microgravity human physiology experiments p 118 A93-25208

Using tactile information in telerobotics p 138 A93-25482

The Space Station Remote Manipulator System p 138 A93-25487

A telerobotic virtual control system p 183 A93-27030

Management of trauma and emergency surgery in space p 167 A93-28734

Aseptic technique in microgravity p 168 A93-28737

Histochemical and contractile responses of rat medial gastrocnemius to 2 weeks of complete disuse p 157 A93-28752

Cancer risk assessment with intermittent exposure p 171 A93-28766

Ground operation of the mobile servicing system on Space Station Freedom p 190 A93-29107

Teleprogramming a cooperative space robotic workcell for Space Station p 190 A93-29109

Knowledge-based task planning for the Special Purpose Dexterous Manipulator p 191 A93-29110

Effect of task complexity on mental performance during immersion hypothermia p 211 A93-30279

Cardiovascular responses during recovery from exercise and thermal stress p 212 A93-30282

Robotics evaluation and characterization (REACH) of the SSRMS concept and technical issues p 230 A93-31031  
[AIAA PAPER 93-1156]

On the control of a class of flexible manipulators using feedback linearization approach p 231 A93-31533

Comparison of spinal health indicators in predicting spinal status in a 1-year longitudinal study p 216 A93-32786

Shape discrimination and the judgement of perfect symmetry - Dissociation of shape from size p 224 A93-32788

Ground-based control of Space Station Freedom-based robots p 263 A93-35570

Effects of long-term weightlessness on roll circularvection p 279 A93-39725

Effects of sleep deprivation and exercise on glucose tolerance p 281 A93-41165

Quantitative EMG analysis in soleus and plantaris during hindlimb suspension and recovery p 326 A93-44176

Baroreflex function and cardiac structure with moderate endurance training in normotensive men p 332 A93-44182

Influence of temperature and metabolic rate on work performance with Canadian Forces NBC clothing p 389 A93-49218

Continuous vs. intermittent work with Canadian forces NBC clothing p 389 A93-49219

A space manipulator with inertially fixed base? p 393 A93-51452  
[AIAA PAPER 93-3866]

Evaluation of spontaneous baroreflex response after 28 days head down tilt bedrest p 386 A93-52404

Machine vision in space p 395 A93-52641

Spectral motion produces an auditory after-effect p 405 A93-55579

Motion sickness and evolution p 399 A93-55930

Mechanisms of immune failure in burn injury p 15 A93-11285

Asthma in aircrew: Assessment, treatment and disposition p 21 A93-11315

A monitoring and control system for complex man-machine systems: Preliminary design p 70 A93-14951

- An improved anthropometric test device  
p 143 N93-19670
- Principles for integrating voice I/O in a complex interface  
p 146 N93-19774
- The active-matrix LC head-down display (AM-LCD): Operational experience and growth potential  
p 148 N93-19782
- Space life sciences overview  
p 158 N93-21074
- The development of an automated cell culture system for use in space life science research  
p 158 N93-21085
- How do zooplankton feed? A critical microgravity experiment  
p 158 N93-21097
- Gravity as a factor in the orientation and vertical migration of marine zooplankton  
p 158 N93-21098
- Cerebral autoregulation in microgravity  
p 173 N93-21112
- Aimed arm movements under changed gravity  
p 193 N93-21113
- Respiratory response to varying degrees of tilt and lower body negative pressure  
p 173 N93-21114
- Bibliography of the Biosciences Division: 1986 to present  
p 209 N93-23343
- Sensory sensitivities and discriminations and their roles in aviation  
p 224 N93-23479
- [AD-A259742] AFTERRISE: Deep body temperature following exercise  
p 218 N93-23984
- [AD-A259887] Influence of the Cold Buster (tm) sports bar on heat debt, mobilization and oxidation of energy substrates  
p 285 N93-28939
- Evaluation of personal cooling systems in conjunction with explosive ordnance disposal suits  
p 350 N93-29471
- [AD-A262862] Fuzzy neural network methodology applied to medical diagnosis  
p 334 N93-29546
- Modelling and simulation of human retinal vision processing  
p 335 N93-30269
- The air traffic controller's mental model and its implications for equipment design and trainee selection  
p 341 N93-30322
- Neurophysiological analysis of circadian rhythm entrainment  
p 361 N93-32018
- [AD-A264681]

## CHINA

- The responses of cardiovascular during head-up tilt plus lower body negative pressure  
p 9 A93-11690
- Results of experiments on the exploration of genetic effect of rocket flight factors with *Drosophila melanogaster*  
p 1 A93-11691
- Protection of *Acanthopanax senticosus* against suspension-induced bone loss in rats  
p 2 A93-13528
- Experimental research of the temperature and humidity control system for manned spacecraft cabin  
p 10 A93-13529
- Effect of DL-DOPA, L-5-HTP and pentobarbital sodium on brain encephalofluorographs in rats  
p 2 A93-13530
- Effects of sustained +Gz stress on BAEP in waked rabbits  
p 10 A93-13531
- Preliminary study on the physiological changes and tolerance in ground squirrels under several specific experimental conditions  
p 2 A93-13532
- A study of biological effects and characteristics of dynamic responses of organism on landing impact  
p 10 A93-13533
- Model building, algorithm and simulation of the pressure control system of a cabin  
p 29 A93-13534
- A new protective breathing apparatus  
p 29 A93-13535
- Response characteristics of semicircular canal in cats under linear acceleration  
p 3 A93-13536
- A software for testing human's ability to trouble-shoot in the condition of multitask  
p 29 A93-13537
- Preliminary observation of influences of three forms of simulated weightlessness on hemorheological characteristics in rabbit  
p 3 A93-13538
- Evaluation of finger motor reaction in flyer when handling throttle and stick  
p 29 A93-13539
- Study on mechanical characteristics of viscera in dogs  
p 3 A93-13540
- Preliminary investigation on personality of pilots  
p 24 A93-13541
- Experimental research on the anti-irradiation effects of KW-1 - Protective effect on the 5-HT content of tissues in irradiated mice  
p 3 A93-13542
- Observation of change in cytochrome oxidase content of cerebral cortex in rat under +Gz stress  
p 3 A93-13543
- Application of system identification to research on cardiovascular regulative function  
p 3 A93-13544
- Effects of oxygen on regulation of cerebral blood flow in rabbits adapted to hypoxia  
p 3 A93-13545

- Effects of antimotion sickness drug mixture B on ultrastructures of cerebral and cerebellar cortexes in suspended rabbits  
p 10 A93-13704
- Value of frequency domain correlative cardiography (FCG) to early diagnosis of coronary heart disease  
p 10 A93-13705
- Characteristics of heart rate response (HRR) in young men during exercise  
p 10 A93-13706
- Effects of different inhalant O2 concentrations on ventilatory and heart rate kinetic responses during exercise  
p 11 A93-13707
- Effects of 1 Gz stress on medium- and long-latency auditory evoked responses  
p 11 A93-13708
- Effects of positive acceleration on the microcirculation of rabbit conjunctiva, mesentery, skin, and pia mater  
p 4 A93-13709
- Pharmacological effects of mixture of *Eleutherococcus* (ELE) and *Elsholtzia* (ELS)  
p 11 A93-13710
- Experimental study of volatile metabolites of human body  
p 11 A93-13711
- The effects of exposure to 50 mT ELF magnetic fields for 96 h on rabbit EEG  
p 4 A93-13712
- Design of ion source of respiratory mass spectrometer  
p 11 A93-13713
- Subtraction of 50 Hz interference from electrocardiogram by using cycle averaging method  
p 11 A93-13714
- The evaluation of tolerance to serious acute hypoxia in humans  
p 11 A93-13715
- Study of the relationship between therapeutic effects and control parameters of ECP using a simulation method  
p 11 A93-13716
- The effects of cephalad body fluid redistribution on the ultrastructure of the vestibular apparatus of guinea pig  
p 4 A93-13717
- Spectral analysis of visual symbols  
p 30 A93-13718
- A study of human brain somatosensory evoked potential and its application to man-machine-environment system engineering - Preliminary exploration of SEP in normal adult  
p 12 A93-13719
- Identification of degree of head injury caused by impact loads in dog and rabbit  
p 4 A93-13720
- Relationship between ERP and workload in manual control  
p 30 A93-13721
- Investigation of nonlinear dynamic responses to random vibration in dogs  
p 4 A93-13722
- The development of a visual color checkerboard stimulator  
p 30 A93-13723
- Human factors in design of military aircrafts' oxygen supply equipment  
p 60 A93-14222
- The optimum design of personal liquid cooling system  
p 60 A93-14314
- The dynamic mathematical model and digital simulation of the environmental control system  
p 61 A93-14319
- Study of overall analysis method of the man-machine-environment systems  
p 61 A93-14413
- The current status and prospects in the study of cell physiology under microgravity  
p 38 A93-16001
- Skin temperature and heat flow of head-neck region under different ambient temperatures  
p 46 A93-16074
- Changes of REG during 4h head-down bed-rest  
p 46 A93-16075
- Effect of hypergravity on astronauts in space flight  
p 48 A93-16254
- Comparison between VDV and a(rms) using simulated impulsive vibration  
p 91 A93-19991
- Windblast tolerance of human thorax and abdomen  
p 91 A93-19992
- Dynamic characteristic of changes of oxygen saturation of blood hemoglobin under conditions of acute hypoxia in human body  
p 91 A93-19993
- Effects of vitamin D and phosphorus level in diet on bone, skeletal muscle and kidney in suspended rats  
p 77 A93-19994
- Method of selection of astronauts cardiovascular regulative function under simulated weightlessness  
p 91 A93-19995
- EEG changes in man during motion sickness induced by parallel swing  
p 92 A93-19996
- Effects of +Gy stress on human body  
p 92 A93-19997
- A physiological signal acquisition and processing system for bed-rest laboratory  
p 103 A93-19998
- A four-pole electric swing and its application to the research on vestibular function  
p 103 A93-19999
- Changes of cAMP and cGMP content in plasma and urine before and after parallel swing stimulation  
p 213 A93-30435
- Self-organizing character of alpha wave in EEG due to acute hypoxic hypoxia in normal subjects  
p 213 A93-30436
- Effect of heat acclimatization on cAMP level in plasma, cerebrospinal fluid and preoptic area-hypothalamus in hyperthermal rabbits  
p 199 A93-30437

- Effect of simulated weightlessness on microvessel permeability of various organs in rabbits  
p 199 A93-30438
- Dynamic multiobjective decision and its application in environmental control and life support system  
p 230 A93-30439
- 'Screening-Controlling' Psychological Selection System for Air Force pilot cadet  
p 222 A93-30440
- Influence of space-flight factors on growth of spirulina  
p 199 A93-30441
- Effect of acute hypoxia exposures on plasma endothelin in rats  
p 199 A93-30442
- Neurobehavioral test in civil aviation flight personnel  
p 223 A93-30443
- Effects of cold injury on serum angiotensin converting enzyme activities in rats  
p 199 A93-30444
- Cardiovascular problems during space flight  
p 213 A93-30445
- Hypoxic ventilatory responsiveness in Tibetan compared with Han residents of 3,658 m  
p 280 A93-41120
- Effects of acute hypoxia on intracranial dynamics in unanesthetized goats  
p 326 A93-44177
- Effects of two kinds of Chinese herb medicine on rabbit's ear microcirculation under simulated weightlessness  
p 327 A93-44842
- Protective effects of *Rhodiola crenulata* on rats under antihypostatic position and professional athletes  
p 327 A93-44843
- Protection of Chinese medicine and low frequency magnetic field against suspension induced bone loss in rat  
p 327 A93-44844
- Radiation dose measurement and biostack experiment in biocabin on board satellite  
p 327 A93-44845
- Evaluation of speech technology for enhancing performance of man-machine systems  
p 350 A93-44846
- Investigation on requirements for ejection acceleration measuring system  
p 332 A93-44847
- Analysis of factors influencing contrast vision in normal eyes  
p 332 A93-44848
- Problems of respiratory physiology during space flight  
p 332 A93-44849
- Review of the space medico-engineering research in China  
p 402 A93-55802
- [AAS PAPER 91-623] Postoperative hyperbaric oxygen treatment of peripheral nerve damage  
p 52 N93-14084
- [AD-A255842]

## D

## DENMARK

- Effects of acute hypoxia on renal and endocrine function at rest and during graded exercise in hydrated subjects  
p 93 A93-20035
- Gravitational stress and volume regulation  
p 165 A93-28709
- Influence of in vivo hypobaric hypoxia on function of lymphocytes, neutrocytes, natural killer cells, and cytokines  
p 280 A93-41123
- Renal hemodynamics, tubular function, and response to low-dose dopamine during acute hypoxia in humans  
p 332 A93-44180
- Arterial pulse pressure and vasopressin release in humans during lower body negative pressure  
p 360 A93-47096
- Effect of water immersion on renal natriuretic peptide (urodilatin) excretion in humans  
p 381 A93-49293
- Volume-homeostatic mechanisms in humans during a 12-h posture change  
p 387 A93-52620
- Central cardiovascular pressures during graded water immersion in humans  
p 402 A93-55457
- Training concept for crew, end user, and ground centre personnel in the Columbus utilisation programme  
p 226 N93-24382

## F

## FINLAND

- Flight helmet weight, +Gz forces, and neck muscle strain  
p 136 A93-24046
- Postural stabilization on a moving platform oscillating at high frequencies  
p 252 A93-35497
- The prediction of the adaptation of circadian rhythms to rapid time zone changes  
p 278 A93-39714
- Determinants of +Gz-related neck pain - A preliminary survey  
p 380 A93-49227
- Degeneration of cervical intervertebral disks in fighter pilots frequently exposed to high +Gz forces  
p 384 A93-52298
- Correlation of results of radiant heat test and convective heat test for three layered protective clothing  
p 194 N93-21161

Biotechnical production and use of pyruvic acid with special reference to coenzyme regeneration  
[VTT-PUBS-77] p 209 N93-23369

## FRANCE

Hypoxia-induced downregulation of beta-adrenergic receptors in rat heart p 37 A93-14973  
For space suits - The multifunction pressure reducer-regulator of Inter technique p 61 A93-15057  
Balance and gait analysis after 30 days -6 deg bed rest - Influence of lower-body negative-pressure sessions p 48 A93-16161  
Free radical attack - Biological test for human resistance capability p 39 A93-17434  
Clinical and diagnostic requirements - Biochemical exploration of amino acid metabolism, tRNA turnover and lymphocyte activation p 49 A93-17442  
Biomedical engineering and space p 103 A93-20015  
T wave changes in humans and dogs during experimental dives p 92 A93-20026  
Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups p 78 A93-20030  
Effects of sleep deprivation on the cognitive capacities of visuo-spatial representation and orientation p 129 A93-21870  
Intracardiac hemodynamics in man during short periods of head-down and head-up tilt p 117 A93-24044  
Preliminary analysis of sensory disturbances and behavioral modifications of astronauts in space p 130 A93-25207  
An assessment of the deflecting effect on human movement due to the Coriolis inertial forces in a space vehicle p 170 A93-28758  
Microgravity and bone adaptation at the tissue level p 170 A93-28761  
Magnetic Resonance Imaging evaluation of lower limb muscles during bed rest - A microgravity simulation model p 212 A93-30280  
Occupational dermatitis in the aircraft industry - 35 years of progress p 215 A93-32776  
Effects of 28-day isolation (ESA-ISEMSI'90) on blood pressure and blood volume regulating hormones p 251 A93-35495  
Water in the solar system and its role in exobiology; Proceedings of the European Geophysical Society General Assembly, 26th, Wiesbaden, Germany, Apr. 22-26, 1991 p 268 A93-36551  
Liquid water and the origin of life p 268 A93-36552  
Some biochemical properties of an acyclic oligonucleotide analogue - A plausible ancestor of the DNA? p 269 A93-36560  
Microgravity and orthostatic intolerance - Carotid hemodynamics and peripheral responses p 278 A93-39716  
Dynamic analysis of human visuo-oculo-manual coordination control in target tracking tasks p 287 A93-41166  
Norepinephrine content in discrete brain areas and neurohypophyseal vasopressin in rats after a 9-d spaceflight (SLS-1) p 273 A93-41167  
Development of the Hermes EVA Space Suit Glove [SAE PAPER 921256] p 299 A93-41426  
Development of a 500 hPa shoulder joint for the European EVA Space Suit System [SAE PAPER 921257] p 299 A93-41427  
Design and preliminary testing of a membrane based water recycling system for European manned space missions [SAE PAPER 921396] p 309 A93-41553  
Immunocytochemical localization of atrial natriuretic factor (ANF)-like peptides in the brain and heart of the treefrog *Hyla japonica* - Effect of weightlessness on the distribution of immunoreactive neurons and cardiocytes p 377 A93-49561  
Reduction of postprandial lipemia after acute exposure to high altitude hypoxia p 382 A93-49567  
Functional adaptation of different rat skeletal muscles to weightlessness p 377 A93-49575  
Effects of unilateral selective hypergravity stimulation on gait p 386 A93-52407  
Nocturnal pituitary hormone and renin profiles during chronic heat exposure p 387 A93-52619  
Evaluation of zolpidem on alertness and psychomotor abilities among aviation ground personnel and pilots p 401 A93-55163  
Allergic, Immunological and Infectious Disease Problems in Aerospace Medicine [AGARD-CP-518] p 14 A93-11283  
Immunization of personnel traveling to a destination in tropical countries: French position p 19 A93-11304  
Operational use of contact lenses by military aircrew [AGARD-AG-334] p 95 A93-15824  
Human performance assessment methods [AGARD-AG-308-ADD] p 133 A93-18868

Otolithic illusions on takeoff and visual information: Reflections in connection with an air accident case p 134 A93-19681  
Fires on board aircraft: Toxicological risk in flight p 126 A93-19694  
The influence of individual sensitivity to stress on the behavior (attitude and performance) of avoidance of an accident p 134 A93-19705  
Study of the spectrum of power of cardiac rhythm during tasks relating to the safety of the control of an apparatus p 127 A93-19707  
Contribution of the analysis of ocular activity (complementary to the electroencephalographic analysis) to the detection of low vigilance in instances of piloting a vehicle p 127 A93-19708  
Advanced Aircraft Interfaces: The Machine Side of the Man-Machine Interface [AGARD-CP-521] p 144 A93-19757  
Flight above a virtual world p 145 A93-19766  
Multimodal dialog system for future cockpits p 146 A93-19773  
G-load effects and efficient acoustic parameters for robust speaker recognition p 146 A93-19775  
SETI in Europe p 237 A93-23908  
Gravity and root morphogenesis p 210 A93-24403  
Exobiology and terrestrial life p 237 A93-24405  
Combat Automation for Airborne Weapon Systems: Man/Machine Interface Trends and Technologies [AGARD-CP-520] p 317 A93-28850  
Nutrition, Metabolic Disorders and Lifestyle of Aircrew [AGARD-CP-533] p 367 A93-32240  
Protein requirements in hypoxia or hypokinesia p 368 A93-32244  
Lipodystrophies in the French military flight crew p 362 A93-32249  
Human factors and the safety of flights: The importance of the management of sleep p 371 A93-32267

## G

## GERMANY

Effects of simulated microgravity (HDT) on blood fluidity p 44 A93-14972  
Bacterial sulfate reduction above 100 C in deep-sea hydrothermal vent sediments p 80 A93-20672  
Short-term microgravity to isolate graviperception in cells p 111 A93-21901  
Response of the circadian system to 6 deg head-down tilt bed rest p 117 A93-24045  
Structure of a molecular chaperone from a thermophilic archaeobacterium p 151 A93-25821  
Increased release of brain serotonin reduces vulnerability to ventricular fibrillation in the cat p 151 A93-26500  
Graviperception in unicellular organisms - A comparative behavioural study under short-term microgravity p 151 A93-26548  
Swimming behavior of the unicellular flagellate, *Euglena gracilis*, in simulated and real microgravity p 151 A93-26549  
Response of adrenergic receptors to 10 days head-down tilt bedrest p 162 A93-28679  
Cardiovascular response to lower body negative pressure before, during, and after ten days head-down tilt bedrest p 162 A93-28681  
Pulmonary responses to lower body negative pressure and fluid loading during head-down tilt bedrest p 162 A93-28682  
Cardiopulmonary function during 10 days of head-down tilt bedrest p 162 A93-28683  
Effects of head-down tilt and saline loading on body weight, fluid, and electrolyte homeostasis in man p 163 A93-28685  
Diuresis and natriuresis following isotonic saline infusion in healthy young volunteers before, during, and after HDT p 163 A93-28688  
Head-down tilt bedrest: HDT'88 - An international collaborative effort in integrated systems physiology p 164 A93-28689  
Rated performance, cardiovascular and quantitative EEG parameters during simulated instrument flight under the effect of terfenadine p 165 A93-28708  
Sperm motility under conditions of weightlessness p 156 A93-28730  
EMATS, a robot-based Equipment Manipulation and Transportation System for the Columbus Free Flying Laboratory p 231 A93-31522  
Bioregenerative life support as self-sustaining ecosystem in space p 231 A93-32073  
Relationship between pituitary ACTH content and hypothalamic catecholamines in the rat p 203 A93-33028  
Two circadian oscillators in one cell p 239 A93-34518

Responses of *Bacillus subtilis* spores to space environment - Results from experiments in space p 268 A93-36556  
Life in hot springs and hydrothermal vents p 243 A93-36559  
Ferrous iron oxidation by anoxygenic phototrophic bacteria p 271 A93-39280  
Recent regenerative ECLSS technology developments in Europe [SAE PAPER 921332] p 304 A93-41493  
Hermes ECLSS - Main requirements and technical solutions [SAE PAPER 921400] p 309 A93-41555  
Effects of chronic hypoxia and exercise on plasma erythropoietin in high-altitude residents p 331 A93-42191  
Manned Space-Laboratories Control Centre (MSCC) training p 339 A93-43330  
Some qualitative and quantitative aspects of the fast-rotating clinostat as a research tool p 375 A93-49209  
How well does the clinostat mimic the effect of microgravity on plant cells and organs? p 376 A93-49213  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. I - Hearing threshold measurements p 377 A93-49555  
The influence of military low-altitude flight noise on the inner ear of the guinea pig. II - Scanning electron micrographs p 377 A93-49556  
Does drinking protect against mountain sickness? p 382 A93-49565  
Pre-adaptation to shiftwork in space p 386 A93-52403  
Dynamic analysis of ocular torsion in parabolic flight using video-oculography p 386 A93-52405  
Future military pilot training - A perspective of industry [AIAA PAPER 93-3601] p 404 A93-52689  
Higher capillary filtration rate in the calves of endurance-trained subjects during orthostatic stress p 401 A93-55165  
Monitoring of pilot actions as part of a knowledge-based system for pilot assistance p 59 A93-15184  
Effects of medium blood alcohol levels on pilots' performance in the Sea King Simulator MK-41 p 125 A93-19683  
Toxicological investigations of flight accidents: Findings and methods p 126 A93-19695  
27 years armed forces aerospace pathology and toxicology in the Federal Republic of Germany: Development, current status, trends and challenges p 126 A93-19696  
Significance of histological postmortem findings in pilots killed in military and civil aircraft accidents in Germany (West): A 25-year-review p 126 A93-19697  
Advanced cockpit-mission and image management p 144 A93-19760  
CVA, cockpit design and development tool p 147 A93-19780  
Equipment, more or less ready to be used in helicopters p 148 A93-19785  
Biochemically active layers for selective material detection sensors [MBB-Z-0440-92-PUB] p 158 A93-20959  
Instructions and advance training measures for the improvement of human reliability [MBB-FE-313-S-PUB-0500] p 181 A93-21402  
User areas in aircraft cockpit, using methods of rapid prototype development [MBB-FE-315-S-PUB-0493] p 196 A93-22389  
Stress resistance as a diagnostic category in air traffic controller selection [DLR-FB-92-13] p 219 A93-24092  
Evoked brain potentials as indicators of a central nervous impairment in a simulated saturation dive to 560 m [DLR-FB-92-14] p 219 A93-24093  
International application of the DLR test-system: Continuation of the cooperation with Iberia in pilot selection [DLR-FB-92-12] p 225 A93-24104  
Selection of astronauts for European space missions p 225 A93-24345  
The European astronauts training programme p 226 A93-24346  
Mir 1992 operations and crew training p 226 A93-24352  
Life in and from space p 237 A93-24373  
Columbus payload requirements in human physiology p 220 A93-24386  
Cardiovascular stress test with non-invasive techniques p 221 A93-24399  
CEBAS-Aquarack: An artificial aquatic animal plant ecosystem as a tool for basic research in the Columbus Space Station p 210 A93-24401



## GREECE

- Ecosystems on Earth and in space (the possible utilization of artificial ecosystems for space life support systems) p 236 N93-24406
- DOKMA: A document oriented communication model for medical applications as a basis of a role system in the medical field p 284 N93-28469
- [ETN-93-93799] p 284 N93-28469
- Pilot intent and error recognition as part of a knowledge based cockpit assistant p 318 N93-28855
- Symbology for head up and head down applications for highly agile fighter aircraft: To improve spatial awareness, trajectory control, and unusual attitude recovery, part 1 p 318 N93-28857
- Photobiological investigations on spores of streptomyces griseus [ESA-TT-1269] p 277 N93-29274
- Computer-generated parallel tests for aptitude measurement in the selection of aviation operators [DLR-FB-92-29] p 343 N93-31229
- Background and objectives of the PARAT program p 343 N93-31230
- Phases of the project development and examination methodologies p 343 N93-31231
- The position test: A computer generated process for acquisition of inductive logic thinking p 343 N93-31232
- The test memorization of symbols and numbers: A computer generated test for visual sensitivity p 343 N93-31233
- The clearance test: A computer generated process for acquisition of auditory short term sensitivity p 343 N93-31234
- The concentration loading test system: A computer generated process for acquisition of attentiveness control p 344 N93-31235
- The aircraft position tests: A computer generated process for acquisition of spatial orientation capability p 344 N93-31236
- The cube rotation test: A computer generated process for acquisition of mental spatial manipulator capability p 344 N93-31237
- The PARAT tests as examination system p 344 N93-31238
- Results and management of pathological lipoprotein concentrations and other cardiovascular risk factors in military pilots of the German Federal Armed Forces p 363 N93-32254

## GREECE

- Applied chemical engineering thermodynamics [ISBN 0-387-54759-2] p 357 A93-46075
- Allergic and nonallergic rhinitis in Greek pilots p 21 N93-11317
- Correlation of serum alpha sub 1 antitrypsin with cigarette smoking and pulmonary function status in Greek pilots, for a ten year period p 22 N93-11318
- Formal aspects of human-computer interaction p 66 N93-13909
- Aircraft accident injuries in the Hellenic Air Force in the last 20 years p 126 N93-19698
- Lipidemic profile of Hellenic Airforce officers p 362 N93-32250
- Correlation of life-style and dietary concomitants of Greek pilots with serum analytes p 369 N93-32256

## INDIA

- Lower body negative pressure system for simulation of +Gz-induced physiological strain p 119 A93-25210
- Alteration of structure and mobility of erythrocyte aggregates under normal- to microgravity conditions p 200 A93-32072
- Changes in body fluid compartments during hypohydration and rehydration in heat-acclimated tropical subjects p 251 A93-35496
- Mathematical model for the exchange of gases in the lungs with special reference to carbon monoxide p 271 A93-39707
- Body fluid compartments, renal blood flow, and hormones at 6,000 m in normal subjects p 281 A93-41125
- Designs and development of a master-slave teleoperated robot p 390 A93-49357

## INTERNATIONAL ORGANIZATION

- C.R.M. training for the advanced flight deck p 24 A93-13410
- A new generation of astronauts in space - The astronaut selection process p 57 A93-17071
- Suction-cup shoes for astronauts - A new method of foot restraint p 62 A93-17072
- Zero-gravity underwater simulations for the Columbus programme - Outcome of the first campaigns p 62 A93-17075
- The training of the new astronaut candidates at EAC p 129 A93-23693

- European astronaut candidates in training in the CIS p 256 A93-34593
- European involvement in CELSS - Definition of a Closed Ecological Systems Test Bed [SAE PAPER 921200] p 295 A93-41376
- An operational evaluation process for long-duration mission habitats in space p 345 A93-42114
- The psychological challenge of space p 339 A93-42658
- Implementation of biological elements in life support systems - Rationale and development milestones p 390 A93-49302

## IRELAND

- The development and use of a generic nonnormal checklist with applications in ab initio and Introductory Advanced Qualification Programs p 180 A93-27456

## ISRAEL

- Visual display aid for orbital maneuvering - Design considerations p 135 A93-23518
- Visual display aid for orbital maneuvering - Experimental evaluation p 136 A93-23519
- Designing the right visor p 181 A93-26885
- Predicting increases in skin temperature using heat stress indices and relative humidity in helicopter pilots p 167 A93-28729
- Flight-path estimation in passive low-altitude flight by visual cues p 223 A93-32004
- Performance under dichoptic versus binocular viewing conditions - Effects of attention and task requirements p 287 A93-40772
- New technologies for in-flight pasteless bioelectrodes p 289 A93-41174
- Acute hypertensive response to +Gz acceleration in mildly hypertensive pilots p 386 A93-52307
- Visual field information in nap-of-the-Earth flight by teleoperated helmet-mounted displays p 311 N93-27177

## ITALY

- The evolution of aminoacyl-tRNA synthetases, the biosynthetic pathways of amino acids and the genetic code p 73 A93-17825
- Influence of stress on lymphocyte subset distribution - A flow cytometric study in young student pilots p 118 A93-25203
- The strategic role of automation and robotics for Columbus utilization p 181 A93-26567
- On the biological effects of cosmic rays - Epidemiological studies p 239 A93-34858
- Long-lasting neuropsychological changes after a single high altitude climb p 278 A93-39713
- Myosin and troponin changes in rat soleus muscle after hindlimb suspension p 273 A93-41124
- Labels and visual cues to reproduce an earthlike environment in space - Going ahead in designing Columbus APM interior architecture [SAE PAPER 921193] p 295 A93-41371
- The effects of a reduced pressure scenario on the Columbus APM environmental control system [SAE PAPER 921247] p 298 A93-41418
- System integration and verification approach for the environmental control system of the Columbus Attached Pressurized Module [SAE PAPER 921261] p 299 A93-41431
- Environmental control of the Mini Pressurized Logistic Module [SAE PAPER 921281] p 302 A93-41449
- Effects of air bubble contamination in recirculating water loop [SAE PAPER 921282] p 302 A93-41450
- Ontology of mind, subjective ontology, and the example of temporal expressions [REPT-92-018] p 26 N93-11212
- Clinical types of Hepatitis B p 15 N93-11286
- Vaccination against Hepatitis B: The Italian strategy p 15 N93-11289
- Silent HIV infection p 16 N93-11293
- HIV variability and perspectives of a vaccine p 16 N93-11294
- Absence of protective immunity against diphtheria in a large proportion of young adults p 18 N93-11302
- Dramatic reduction of meningococcal meningitis among military recruits in Italy after introduction of specific vaccination p 18 N93-11303
- Clinical and immunological response to vaccination with parenteral or oral vaccines in two groups of 30 recruits p 19 N93-11305
- Cytokines as vaccine adjuvants: Interleukin 1 and its synthetic peptide 163-171 p 20 N93-11309
- The screening of inhalant allergic diseases in the selection of candidates for aircraft piloting p 21 N93-11312
- In vivo and in vitro diagnosis of allergic respiratory disease during screening procedures in the Italian Navy: Comparative evaluation of a recent quantitative automatized enzyme immunoassay method to dose specific IgE p 21 N93-11314

## FOREIGN TECHNOLOGY INDEX

- Conversion of temporal correlations between stimuli to spatial correlations between attractors [PREPRINT-856] p 96 N93-16962
- Constraints on learning in dynamic synapses [PREPRINT-890] p 100 N93-17026
- Effective neurons and attractor neural networks in cortical environment [PREPRINT-829] p 82 N93-17214
- Spontaneous regulating mechanisms that may have led to the origin of life [DE93-603677] p 331 N93-31161
- Idiopathic Reactive Hypoglycemia in a population of healthy trainees of an Italian Air Force military school p 368 N93-32248
- Cardiovascular risk factors in an Italian Air Force population: Preliminary report p 362 N93-32252

## J

## JAPAN

- Design of a display system for a human pilot's supervisory tasks p 27 A93-11201
- Human factors in the 'glass cockpit' p 27 A93-11202
- Space robotics and its man-machine interface p 27 A93-11204
- Study of the whole-body response to vibration: The effect of repeated exposure to the long-term whole-body vibration. II p 9 A93-11286
- Controllability of the voice command system - A preliminary study p 27 A93-11287
- Organic models of interstellar grains p 35 A93-11847
- Behavioral adaptation to sustained hypobaric hypoxia manifested by timing behavior in rats. I p 37 A93-15526
- Adaptation of skeletal muscles and physical work capacity in a weightless environment p 38 A93-15527
- Hematological changes in space microgravity environments p 46 A93-15528
- Contribution of psychiatry to life in space p 56 A93-15529
- The cardiovascular system p 46 A93-15530
- An experimental approach to chemical evolution in submarine hydrothermal systems p 74 A93-18008
- Thermogenesis induced by inhibition of shivering during cold exposure in exercise-trained rats p 75 A93-18039
- Modification of water and electrolyte metabolism during head-down tilting by hypoglycemia in men p 92 A93-20029
- Influence of viscous resistance on heart rate and oxygen uptake during treadmill walking in water p 94 A93-20898
- Effects of head down tilt on hepatic circulation and metabolism in conscious dogs p 80 A93-20899
- Research and development of sensing and manipulation techniques for space robotics on a testbed [AIAA PAPER 93-0794] p 136 A93-24873
- Thermal evolution of cometary nuclei by radioactive heating and possible formation of organic chemicals p 196 A93-27561
- Changes in vitamin A status following prolonged immobilization (simulated weightlessness) p 166 A93-28720
- Simulated weightlessness and bone metabolism - Gravitational stimulation enhances insulin sensitivity p 168 A93-28736
- Working hours and fatigue of Japanese flight attendants (FA) p 171 A93-28762
- Two types of occlusion cues for the perception of 3-D illusory objects in binocular fusion p 222 A93-30239
- Cardiovascular responses to upright tilt at a simulated altitude of 3,700 m in men p 212 A93-30281
- Ultrastructural and biochemical studies on muscle atrophy induced by suspension and suspension with denervation in lower limbs of rats p 200 A93-31530
- Effects of visually induced self-motion perception (vection) on upright standing posture p 214 A93-31531
- Human behavior in virtual environments p 233 A93-33447
- High-altitude pulmonary edema with pulmonary thromboembolism p 278 A93-39709
- Neuropharmacology of motion sickness and emesis - A review p 271 A93-39711
- Motion sickness induced by sinusoidal linear acceleration in rats p 272 A93-39712
- A trade study method for determining the design parameter of CELSS subsystems [SAE PAPER 921198] p 295 A93-41374
- Development of the nitrogen fixation system for CELSS [SAE PAPER 921238] p 297 A93-41411

Concept of waste transferring mechanisms  
[SAE PAPER 921239] p 297 A93-41412  
Experimental and theoretical study on membrane distillation using thermopervaporation  
[SAE PAPER 921397] p 309 A93-41554  
Cognitive performance and event-related brain potentials under simulated high altitudes p 331 A93-42189

On the reaction of 2-aminopropionitrile in aqueous media p 354 A93-43791  
Catalytic accretion of thermal heterocomplex molecules from amino acids in aqueous milieu p 354 A93-43793  
Respiration curves as an index of pilot workload p 332 A93-45320

Relationship between alcohol drinking habit and blood pressure changes during the period of 25 years on JASDF aged pilots p 333 A93-45321

The effect of G-experience on heart rate during +Gz loading p 333 A93-45322  
A computer simulation model for attention distribution and event generation p 340 A93-45323

Image technology and information analysis of bone change with gravitational exposure p 378 A93-49177  
Arterial oxygen saturation during +Gz acceleration by short-radius centrifuge p 379 A93-49178

Effect of chronic centrifugation on in vitro fertilization and early development in mice ova p 375 A93-49179  
Effect of food intake on skin vasomotor responses to head-up tilt in humans p 379 A93-49180  
Hemodynamic and hormonal correlates with exposure to lower body negative pressure after 12 hours head-down tilt p 379 A93-49220

Flight crew sleep during multiple layover polar flights p 380 A93-49226

Effects of high altitudes on finger cooling test in Japanese and Tibetans at Qinghai Plateau p 382 A93-49560

Effect of transdermally administered scopolamine on the vestibular system in humans p 383 A93-49572  
Salivary total protein and experimental Coriolis sickness p 383 A93-49573

Theoretical and experimental studies for continuous path control of flexible manipulator mounted on a free-flying space robot p 392 A93-51449  
[AIAA PAPER 93-3863]

Mortality experience of cockpit crewmembers from Japan Airlines p 385 A93-52306

Planetary quarantine in the solar system - Survival rates of some terrestrial organisms under simulated space conditions by proton irradiation p 378 A93-52408

CELSS nutrition system utilizing snails p 394 A93-52411

Effect of water immersion on muscle sympathetic nerve response during static muscle contraction p 402 A93-55328

Shortening velocity and calcium sensitivity of single fibers from hindlimb suspended muscle in rats p 398 A93-55329

Psychophysiological study on the effects of co-existence of lines for detecting dot target p 405 A93-55330

Optimal manipulator trajectories for space robots p 410 A93-55838  
[AAS PAPER 91-669]

Research of a free-flying telerobot. IV - Development of dual-arm manipulation system p 411 A93-56254

Research of a free-flying telerobot. V - Handling a target with multi-arms p 411 A93-56255

Telemanipulation experiment using predictive display p 411 A93-56256

Skill compensation and dynamic coupling of macro/smart effector system p 411 A93-56260

Study on environment control and life support technology p 149 N93-20413

Telescience testbedding for physiological experiments under hypobaric hypoxic conditions p 220 N93-24398

Japanese treefrog experiment onboard the Space Station Mir p 210 N93-24402

Conceptual study on manned lunar surface site p 316 N93-28029

Conceptual study of manned lunar surface site p 316 N93-28031

Manned lunar surface site: Conceptual study on pressurized lunar surface operation rover p 316 N93-28032

Manned lunar surface site p 316 N93-28033

Lunar surface experiment system p 316 N93-28034

## K

## KAZAKHSTAN

Correlation between the lymph dynamics and venous pressure during short-term antihypertensive effects p 325 A93-43070

## KOREA, REPUBLIC OF

Ethical concerns in the practice of military aviation medicine p 89 A93-18045

## KYRGYZSTAN

The effect of the activation of the sympatho-adrenal system on catecholamine inactivation in rat lungs p 2 A93-12864

Functional state of the vegetative nervous system in women undergoing high-altitude adaptation and readaptation to 760 m above sea level p 44 A93-15165

## L

## LATVIA

Evaluation of the efficiency of the pilot's control activity in a flight simulator p 100 A93-18347

A procedure for estimating the variables of the working-condition space of a man-machine system for the control of a moving object p 364 A93-45685

## M

## MEXICO

Computational study of radiation chemical processing in comet nuclei p 109 A93-17982

## N

## NETHERLANDS

Studies towards the crystallization of the rod visual pigment rhodopsin p 1 A93-11150

Comparison of four noninvasive rewarming methods for mild hypothermia p 88 A93-18037

Energy expenditure climbing Mt. Everest p 92 A93-20031

Increased orthostatic blood pressure variability after prolonged head-down tilt p 161 A93-28676

Influence of posture and prolonged head-down tilt on cardiovascular reflexes p 161 A93-28677

HERA - A reliable and safe space robot p 263 A93-35571

Laboratory simulation of organic grain mantles p 268 A93-36554

Barotrauma in Boeing 737 cabin crew p 278 A93-39706

Inhibition of EGF-induced signal transduction by microgravity is independent of EGF receptor redistribution in the plasma membrane of human A431 cells p 272 A93-39715

Nucleotide analogs based on pentaerythritol - An hypothesis p 325 A93-43794

Altered gravity conditions affect early EGF-induced signal transduction in human epidermal A431 cells p 376 A93-49214

What optical cues do pilots use to initiate the landing flare? Results of a piloted simulator experiment p 406 A93-52661

[AIAA PAPER 93-3561]

A comparative evaluation of three take-off performance monitor display types p 406 A93-52669

[AIAA PAPER 93-3608]

False cue detection thresholds in flight simulation p 407 A93-52674

[AIAA PAPER 93-3578]

Phadiatop: A screening test for inhalant allergy p 21 N93-11313

A spurious pop-out in visual search p 57 N93-14267

[AD-A256548]

Decision making in a dynamic task environment: The effect of time pressure p 58 N93-14602

[AD-A256557]

High-resolution contrast control on a video display: Method and calibration p 60 N93-15400

[AD-A256552]

Occupant simulation as an aspect of flight safety research p 142 N93-19665

Engineering the visibility of small features on electronic flight displays p 144 N93-19758

A new concept for helmet mounted vision p 145 N93-19767

Two strikes against perfect phylogeny p 157 N93-20848

[RUU-CS-92-08]

A body mass measurement device based on the oscillation principle p 221 N93-24400

Overview of cockpit technology research and development programs for improvement of the man/machine interface: Review of the AGARD AVP Symposium held in Madrid, May 1992 p 320 N93-28872

An automated processing system for food frequency and nutrition knowledge questionnaire p 367 N93-32241

## NEW ZEALAND

The 'artful' decision maker - A framework model for aeronautical decision making p 56 A93-15662

Modern life at high temperatures p 74 A93-18003

## NIGERIA

Perfusion of the visual cortex during pressure breathing at different high-G stress profiles p 401 A93-55167

## NORWAY

Man-machine interface issues for space nuclear power systems p 60 A93-13907

Vestibular problems in diving and in space p 169 A93-28747

The psychological effects of isolation on a space station - A simulation study p 287 A93-41369

[SAE PAPER 921191]

Variability over time of complement activation induced by air bubbles in human and rabbit sera p 323 A93-42190

The next generation female in cockpit: Do we need a new approach to cockpit resource management (CRM)? p 143 N93-19704

The USO-concept applied to a biological model experiment p 210 N93-24379

Portable equipment developed to estimate energy expenditure by simultaneous recording of heart rate and body position p 368 N93-32243

Changes in food and energy intake in military aircrew p 368 N93-32246

Changes in some lifestyle parameters in Norwegian pilots as students, and after 6 and 12 years of service p 370 N93-32261

## P

## POLAND

Methodology for ergonomic tests of the information display on monitor indicators p 101 A93-18530

Ergonomic aspects of the presentation of piloting-navigation information p 101 A93-18531

On cockpit (crew) resource management p 223 A93-31490

Information management problems and their influence on cockpit equipment architecture of transport aircraft p 223 A93-31491

Muscle mitochondrial density after exhaustive exercise in dogs - Prolonged restricted activity and retraining p 242 A93-35498

## PORTUGAL

Civil aviation and cardiology - Admission rules and follow-up of the technical flying personnel of TAP-Air Portugal p 164 A93-28699

Nutritional and lifestyle status of 50 pilots of the Portuguese Air Force p 369 N93-32255

## PUERTO RICO

Human factor considerations for the First Lunar Outpost p 223 A93-30928

[AIAA PAPER 93-1014]

## R

## ROMANIA

Fractures of the vertebral column after ejection p 46 A93-15575

## RUSSIA

Principles of the organization of calcium metabolism p 7 A93-10124

The adrenalin/noradrenalin and the alpha/beta adrenoreceptor correlations in the myocardium and the adrenergic chronotropic and inotropic reactions under extreme conditions and during adaptation p 1 A93-10125

Flavoproteins as natural prototypes of molecular electronic devices with photocontrolled conductivity p 1 A93-11199

The effect of low-intensity electromagnetic millimeter-wave radiation on the rat cardiovascular system p 2 A93-12861

The values of the skin-temperature gradients and their significance for thermoregulation p 9 A93-12862

The prospects for the improvement of medical monitoring of the health of flight personnel in a military unit p 10 A93-12969

Application of contrasting temperatures as a method of preadapting pilots to the conditions of a hot climate p 45 A93-15166

Reaction characteristics of several neuroregulating systems of cosmonauts after a 366-day-long space flight p 45 A93-15167

Contractile properties of the calf triceps muscle in humans exposed to simulated weightlessness p 45 A93-15168

The quality of an operator's work on a flight simulator under conditions of thermal discomfort p 45 A93-15172

Pharmacological means of stimulating the work capacity of flight personnel engaged in stressful activity p 45 A93-15173

Subjective reactions and objective assessment of the auditory and ventilatory functions of the middle ear during changes in atmospheric pressure p 45 A93-15174

- Psychophysiological characteristics of the activity of flight personnel during training on VTOL aircraft p 45 A93-15175
- The role of dermorphin in the regulation of the winter hibernation processes in mammals p 38 A93-16748
- Vagotropic effects of peptides isolated from the brain of hibernating susliks p 38 A93-16749
- Effect of high temperature on the beta-adrenoreceptor activity and the catecholamine synthesis p 39 A93-16750
- Hypokinesia and weightlessness: Clinical and physiologic aspects [ISBN 0-8236-2415-3] p 87 A93-17897
- Intraslow bioelectric activity of the monkey's brain in the development of the high-pressure neural syndrome p 75 A93-18286
- Functional state of the central nervous system of guinea pigs after a prolonged stay in artificial atmospheres with different gas compositions p 75 A93-18287
- Control of breathing under conditions of altered atmospheric density during muscular work p 89 A93-18288
- The effect of elevated nitrogen pressure on motor activity and relationships among brain centers in monkeys p 75 A93-18289
- Motor activity of animals under elevated pressure p 75 A93-18290
- Local blood supply of the brain of guinea pigs developing the high-pressure neural syndrome p 76 A93-18293
- The state of brain oxygenation in guinea pigs breathing high-density gas mixtures p 76 A93-18294
- Distribution of oxygen tension in pial arterioles of rats under normobaric hyperoxia p 76 A93-18295
- Polyphosphoinositide response to various neurotransmitters after an exposure to a helium-oxygen atmosphere at a high pressure p 76 A93-18296
- Maximal lung ventilation and forced expiration rate under hyperbaria p 76 A93-18297
- Parameters of external breathing in an excess-pressure atmosphere p 76 A93-18298
- An analysis of the respiratory muscle fatigue under resistive loading when breathing gas mixtures containing different amounts of oxygen p 76 A93-18299
- Electrophysiological and ultrastructural aspects of the effect of high-pressure oxygen on the sensorimotor cortex of the rat brain p 77 A93-18300
- Gas composition in the blood of rabbits exposed to a high-pressure atmosphere under conditions of spontaneous and forced ventilation p 77 A93-18301
- A device for the prolonged restraint of primates in closed-space conditions p 77 A93-18302
- K.E. Tsiolkovsky and biomedical problems connected with space exploration: Lectures Devoted to K.E. Tsiolkovsky's Ideas, 25th, Kaluga, Russia, Sept. 11-14, 1990, Transactions p 90 A93-18406
- K.E. Tsiolkovsky on the problem of human survival in extreme environments (On the earth and in space) p 77 A93-18407
- Development of K.E. Tsiolkovsky's ideas on the interaction between space, nature, and man p 90 A93-18408
- K.E. Tsiolkovsky on the role of the human factor in the problem of space flight safety p 100 A93-18409
- Approaches to solving the problem of decompression safety of cosmonauts on their flights to Mars p 90 A93-18410
- Problems of medical support during extravehicular activity during flights to Mars p 90 A93-18411
- Physical fitness as a criterion of readiness for spaceflights p 98 A93-18412
- K.E. Tsiolkovsky on individual time perception and some characteristics of intuitive perception of the properties of time at different levels of motor activity and health p 98 A93-18413
- Consequences of a basic model of external-information perception p 98 A93-18414
- The efficiency of a prophylactic-rehabilitational treatment of civil-aviation flight crews p 91 A93-18415
- Preclinical cardiovascular and neurological occupation-related pathological symptoms in helicopter pilots p 91 A93-18416
- Psychophysiological studies of acute hypoxic hypoxia p 91 A93-18417
- Effects of possible pollution sources of the atmosphere of a closed ecosystem on the growth of test microorganisms p 101 A93-18418
- Engineering and technical support of experiments on board the Cosmos-2044 biosatellite p 77 A93-18419
- Dynamics of normalization of some behavioral and neurochemical disturbances in rats caused by the deprivation of the paradoxical sleep stage p 111 A93-23074
- Study of the functioning of the central and the peripheral contours of the thermoregulation system using a thermophysical model of the rabbit body p 111 A93-23075
- Psychophysiological factors which impair the professional reliability of a pilot in emergency situations p 129 A93-23150
- Effect of prolonged antiorthostatic bed rest hypokinesia on functional properties of the neuromuscular system in humans p 116 A93-23151
- Formation of the hypokinetic syndrome in the digestive system under conditions of weightlessness p 119 A93-25600
- Investigation of the character of changes in the 'central' temperature of the body in cold environment, using a rabbit-body thermoregulation model p 112 A93-25651
- The rhythm of heart activity and arrhythmia in long-term space flights p 119 A93-25652
- Illusions of visual-target motion caused by electrical vestibular stimuli p 119 A93-25653
- A method for the theoretical calculation of the parameters of single-stage decompression with equal probability of safety p 160 A93-26832
- The role of rheoencephalography in the practice of aviation medicine p 160 A93-27649
- The problem of oxygen regimen in extreme conditions p 160 A93-27685
- Some biochemical and functional characteristics of body state during multihour operator activity under extreme conditions p 161 A93-27686
- A method of multivariate analysis of data in the study of the effects of space flight factors on the rat brain neuron structure p 155 A93-28727
- Health in space - And on Earth p 156 A93-28738
- Oxygen tension and water-soluble products of lipid peroxidation in blood of volunteers in hypobaric hyperoxia p 169 A93-28751
- Effect of exercise and bisphosphonate on mineral balance and bone density during 360 day antiorthostatic hypokinesia p 170 A93-28760
- Estimation of the number of operators and their efficiency in flight vehicle control p 193 A93-29696
- Changes in the osmolality, monovalent cation concentration, and protein structure of blood plasma under extreme conditions p 200 A93-31188
- On a possible role of carbon dioxide in the genesis of the hyperbaric neural syndrome p 200 A93-31190
- Investigation of fluid-electrolyte metabolism and its hormonal regulation during the second joint Soviet-French space mission p 247 A93-35207
- Cardiac bioelectric activity in healthy men during a 370-day head-down tilt experiment p 247 A93-35208
- Investigation of hemodynamics and sympatheticoadrenal system activity in air traffic controllers during their work p 247 A93-35209
- Lipid peroxidation and the antioxidant defense system in rats after a 13-day flight on the Cosmos-1887 biosatellite p 239 A93-35210
- Spontaneous and evoked activity of neurons in the parietal associative cortex of cats during motion sickness p 239 A93-35211
- Hematologic status of rats born and grown in a hypergravity environment p 239 A93-35212
- A comparative analysis of the bone marrow cell composition in rats following a long-duration continuous or interrupted exposure to a hypogeomagnetic field p 240 A93-35213
- Human biorhythms following interregional travel (with reference to Novosibirsk-Vladivostok flights) p 247 A93-35214
- A free-fall flip-over response in rats after the flight onboard the Cosmos-936 biosatellite p 240 A93-35215
- The role of ultraviolet radiation and vitamin-D metabolism in medical care during space flights p 247 A93-35216
- Pharmacological defense of the brain during radiation damage - Some arguments p 240 A93-35217
- The character of spontaneous oculomotor activity in weightlessness and during readaptation p 248 A93-35219
- Adaptation of young pilots to new conditions of their work (Social-psychological aspects) p 256 A93-35220
- Hemodynamic status of humans during a graded orthostatic test p 248 A93-35221
- Informative value of the rerespiration method for evaluating the functional resources of the cardiorespiratory system during the simulation of certain flight factors p 248 A93-35222
- Equivalent dose of cosmic rays at representative points of human-body models p 248 A93-35223
- Features of the effect of hypokinesia on cardiac activity in rats with high and low spontaneous motor activity p 240 A93-35224
- Accumulation of calcium ions in the myocardial sarcoplasmic reticulum of restrained rats exposed to a pulsed electromagnetic field p 240 A93-35225
- Significance of a comparison of results of caloric and vestibulometric rotation tests p 248 A93-35226
- Age and length of service of flight personnel in the case of chronic diseases p 248 A93-35227
- Validation of the use of the helium-neon laser in the medical rehabilitation of patients with atrophy p 248 A93-35228
- Effect of an attenuated geomagnetic field on the cellular composition of the epithelial-spermatogenous layer of rat testes p 240 A93-35229
- Radiation conditions onboard passenger aircraft p 249 A93-35230
- Some features characterizing the supply of astronauts with vitamins C, B1, B2, and B6 during nourishment from canned-food rations on long-term space flights p 249 A93-35231
- Central neurophysiological and neurochemical vomiting mechanisms (Review of the literature) p 240 A93-35232
- Psychophysiological principles of flight training for actions in nonroutine situations p 256 A93-35233
- Data bank establishment principles as applied to the problem of physiological norms in space medicine p 249 A93-35234
- Altitude stress and cosmonaut training p 262 A93-35235
- Methodology for clinical testing of antiradiation means intended for manned space flight conditions p 249 A93-35236
- Microflora of cabins of manned space objects and the problem of biological damage to the structural materials used in them p 262 A93-35237
- Functional state of the cardiovascular system of the cosmonauts of the sixth primary mission on the Mir station p 249 A93-35238
- Ultrasonic location of gas bubbles in the vascular bed of a person working in a space suit p 262 A93-35239
- Morphological analysis of the hepatic structures in experimental animals after infrasonic exposure p 240 A93-35240
- The asthenic syndrome and the dynamics of mental-work capacity p 256 A93-35241
- The Inkubator-2 complex for studying the embryonic and postembryonic development of birds in conditions of weightlessness p 241 A93-35242
- Protein composition of the blood plasma of cosmonauts after lengthy orbital flights p 249 A93-35243
- Efficiency of using iterative hypoxic hypercapnic stimuli for enhancing cardiorespiratory reserves under the effect of radial accelerations p 249 A93-35244
- Autorosette formation in the peripheral blood of people with lengthy limitations of motor activity p 250 A93-35245
- Turning-over reaction during free fall in labyrinthectomized rats after a flight on the Cosmos 936 biosatellite p 241 A93-35246
- Microwaves and the visual analyzer p 250 A93-35247
- Ecological-morphological features of the growth and distribution of cultures of unicellular organisms in a gravitational field p 241 A93-35248
- Control of the development of occupationally important qualities with the aim of improving flight-personnel training p 257 A93-35249
- Age-related changes in hemoglobin and erythrocyte levels p 250 A93-35250
- Psychosomatic status and flying skill during geomagnetic disturbances p 257 A93-35251
- Features of an ethanol effect in operators with different states of skin tissue basophils p 250 A93-35252
- Diurnal rhythmicity of human orthostatic stability p 250 A93-35253
- Metabolism in cosmonauts - Results of biochemical blood analyses for crew members of seven primary missions on the Mir orbital station p 250 A93-35254
- Effect of stays at medium-mountain altitude on the maintenance of the good health and high physical work capacity of cosmonauts over a prolonged period of time p 250 A93-35255
- Vestibulo-oculomotor responses under conditions of immersion hypokinesia p 251 A93-35256
- The state of cardiac activity control in humans during cyclic changes of barometric pressure in a hermetic chamber p 251 A93-35257
- Some indices of humoral immunity in Rhesus monkeys under the effect of extreme space flight factors p 241 A93-35258
- Hemodynamics in monkeys during antiorthostatic hypokinesia at angles of -6 and -20 deg p 241 A93-35259
- Healing of fractured bone in rats during readaptation following 14-day suspension p 241 A93-35260
- Dynamics of the central and peripheral circulation of active rats on the first day of antiorthostatic hypokinesia (The role of training) p 242 A93-35261
- Combined effect of head-down tilt and gamma rays on the higher nervous activity of rats p 242 A93-35262
- Early andrological effects in rats under the combined effect of irradiation and vibration p 242 A93-35263

Interlabyrinth otolithic asymmetry under normal conditions and after the effect of a gravity change p 242 A93-35264

Manipulator system for module redocking on the Mir Orbital Complex p 263 A93-35534

Peroxidative oxidation of lipids and chromosome aberrations in mice after repeated exposures to a helium-oxygen respiration mixture under hyperbaric conditions p 243 A93-35672

Cryoprotective properties of water in the earth cryolithosphere and its role in exobiology p 269 A93-36558

Changes in the brain blood flow and respiration during psychoemotional stress p 252 A93-36723

Structural and cytochemical signs of the development of deadaptation, as determined from blood characteristics p 252 A93-36724

New aspects of using hyperbaric oxygenation in aviation medicine p 252 A93-36742

Occupational health problems in aviation medicine p 252 A93-36743

Diagnostics and prophylaxis of adverse psychological states in marine aviation flight personnel p 257 A93-36744

Drugs for sustaining the work capacity of aircraft personnel during extreme emotional stress p 253 A93-36745

Oxygen regime in the frontal cerebral cortex of monkeys during a two-week space flight p 272 A93-40773

New technology for the analysis of the results of an ultrasound experiment performed in aviation-medicine medical examination p 279 A93-40774

Functions simulation model of integrated regenerable life support system [SAE PAPER 921201] p 295 A93-41377

Effect of adaptation to hypoxia on the contractile activity of fast and slow muscles in the rat p 324 A93-43035

Adjustable temperature level of a physiological thermostat and the feasibility of its precise maintenance p 324 A93-43036

Effect of hypoxic hypoxia on the immune response and some factors of nonspecific resistance of human and animal organisms p 325 A93-43074

Röntgenophosphore as an indicator of the radiation excitability of the central nervous system p 325 A93-43078

The efficiency of thermoregulatory responses in the cooling of the organism p 325 A93-43136

Some characteristics of the etiopathogenesis of hearing loss in aircraft personnel p 359 A93-45691

A modified method for investigating gastric secretion in aviation medical examination p 359 A93-45692

The human EEG correlates during many-sided peripheral exposure to an alternating magnetic field p 363 A93-46966

Electromyographic patterns of the thermoregulatory activity of motor units during cooling of the organism p 360 A93-46968

Changes in the phospholipid and cholesterol content of rat tissues during adaptation to high altitude at different environmental temperatures p 358 A93-47100

Flavine-dependent processes in model prebiological systems p 372 A93-47125

Role of the central nervous system in the control of hibernation p 378 A93-51025

Changes in the intensity of free-radical reactions in the organs of rats under hypokinetic stress, protected by the delta-sleep-inducing peptide and its tyrosine-containing analogue p 378 A93-51101

Analysis of individual differences between psychological reactions of humans under combined hypoxic stress p 388 A93-51115

Immune and physiological mechanisms of hypoxic reactions p 384 A93-51116

Regulation of the carbohydrate metabolism in humans residing in the North p 384 A93-51117

Main medical results of extended flights on Space Station Mir in 1986-1990 p 386 A93-52401

The limits of human impact acceleration tolerance [AIAA PAPER 93-3572] p 400 A93-52692

Computerized teaching of pilots to spatial orientation flight tasks p 404 A93-52694

Linear tetrapyrroles (phycobilins) in a model prebiological system p 398 A93-53350

Ozone - A new aspect of its effect on microorganisms p 398 A93-54971

Hypobaric hypoxia as a correction and rehabilitation method in aviation medicine p 402 A93-55332

Dynamics of electroencephalographic indices during acute hypoxia p 402 A93-55333

The problem of the pilot's professional reliability p 410 A93-55334

JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-024] p 40 A93-13033

JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-025] p 244 A93-25405

JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-020] p 244 A93-25406

JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-022] p 253 A93-25407

JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-93-005] p 276 A93-28683

JPRS report: Science and technology. Central Eurasia: Life sciences [JPRS-ULS-92-027] p 276 A93-28684

## S

## SAUDI ARABIA

Case report - Chronic sub-dural hematoma following high-speed ejection p 282 A93-41171

Prefabricated foldable lunar base modular systems for habitats, offices, and laboratories p 106 A93-17444

## SINGAPORE

Incorporating robot vision in tele-autonomous systems p 184 A93-27031

## SPAIN

Tobacco and health of the pilot [ETN-93-93693] p 217 A93-23414

Trial of emergency ration of the Spanish Air Force p 368 A93-32247

Cardiovascular Risk Factors (CVRF) in Spanish pilots with coronary artery disease demonstrated by angiographic studies p 362 A93-32253

Objective improvements obtained by control of diet and physical training in Spanish Air Force fighter pilots p 369 A93-32258

Survey of smoking habits in the Spanish Air Force p 370 A93-32262

## SRI LANKA

Chiral symmetry breaking in nonlinear autocatalytic reactions and the effect of external noise p 269 A93-36564

## SWEDEN

Reduced voluntary non-visual suppression of the vestibulo-ocular reflex gain during nitrous oxide narcosis p 7 A93-10329

Why are hydrothermal systems proposed as plausible environments for the origin of life? p 73 A93-18001

Hydrothermal systems - Their varieties, dynamics, and suitability for prebiotic chemistry p 73 A93-18002

Future research p 74 A93-18010

Up/down in (im)possible flight attitude indicators - Some effects of colour, shape and pattern p 185 A93-27128

The binding and reactions of nucleotides and polynucleotides on iron oxide hydroxide polymorphs p 325 A93-43795

Intracellular targeting of the Yersinia YopE cytotoxin in mammalian cells induces actin microfilament disruption [FOA-B-40420-4.4] p 275 A93-27989

Plasmid encoded virulence of Yersinia [FOA-B-40419-4.4] p 275 A93-28199

Characterization and classification of strains of Francisella tularensis isolated in the central Asian focus of the Soviet Union and in Japan [FOA-B-40421-4.4] p 275 A93-28200

Use of RNA hybridization in the diagnosis of a case of ulceroglandular tularemia [FOA-B-40422-4.4] p 275 A93-28212

Micro-organisms, cytotoxins and radioactive preparation: Risks at rescue operations in hospital environment [FOA-A-40065-4.5] p 359 A93-32423

## SWITZERLAND

Psychophysiological stress research - Methodology and results of an investigation involving air traffic controllers [ISBN-3-258-04585-2] p 97 A93-17971

Protein absorption and energy digestibility at high altitude p 115 A93-21683

Effect of head-down tilt bedrest (10 days) on lymphocyte reactivity p 163 A93-28684

Cultivation of Hamster Kidney cells in a Dynamic Cell Culture System in space (Spacelab IML-1 mission) p 200 A93-32071

The fast rotating clinostat - A history of its use in gravitational biology and a comparison of ground-based and flight experiment results p 376 A93-49212

Space flight and immune system p 14 A93-11284

Hepatitis A and Hepatitis B: Risks compared to other vaccine preventable diseases and immunization recommendations p 15 A93-11288

HIV infection in the nineties p 15 A93-11290

Communicable diseases: A major burden of morbidity and mortality p 18 A93-11300

Recent lessons on the safety and effectiveness of malaria chemoprophylaxis in a non-immune population p 19 A93-11307

Future approaches to vaccine development single-dose vaccines using controlled-release delivery systems p 20 A93-11310

## T

## TURKEY

An assessment of Turkish Air Force pilots' anxiety and depression levels p 23 A93-10334

Assessment of morale in Turkish Air Force pilots with two clinical psychological tests p 133 A93-19660

Gremlins: A dozen hazardous thought and behavior patterns as risk factors p 134 A93-19709

Effectiveness of birthdate biorhythm theory on flight accidents p 127 A93-19710

## U

## UKRAINE

Effects of a 1-yr stay at altitude on ventilation, metabolism, and work capacity p 92 A93-20028

Characteristics of the effect of inert gases on in vivo tissue respiration p 112 A93-23152

Effect of low-frequency vibration on the activity of dehydrogenases in neurones of the nucleus vestibularis anterior of rats p 242 A93-35670

The state of the endocrine system of rats of different age under conditions of immobilization stress and biomes administration p 242 A93-35671

Ion transport across membranes under exposure of the organism to ionizing radiation [ISBN 5-12-001601-4] p 243 A93-35679

Investigation of individual and typological features of an operator's nervous system under different work regimes p 339 A93-43024

Mechanisms of the antihypoxic effect of taurine p 325 A93-43073

Distribution of functions in a man-machine control system of a certain type p 364 A93-45687

A method for predicting the work load of a flight engineer engaged in counteracting failures of functional systems of a transport aircraft p 364 A93-45688

Changes in the central hemodynamics under antihypoxosis in humans with different blood circulation types and physical training levels p 359 A93-46967

## UNITED KINGDOM

To the stars with the cytoskeleton? p 1 A93-11198

Training for avionics evaluation [AIAA PAPER 92-4068] p 24 A93-11254

Human factors on advanced flight decks; Proceedings of the Conference, London, United Kingdom, Mar. 14, 1991 [ISBN 0-903409-85-2] p 29 A93-13408

Airline training for advanced technology cockpits p 24 A93-13411

Keeping the pilot in the loop p 29 A93-13413

Vision modelling applications for display optimisation p 29 A93-13414

Advanced civil airliner cockpit research at RAE Bedford p 29 A93-13416

Predictable eye-head coordination during driving p 57 A93-16373

Mineral theories of the origin of life and an iron sulfide example p 74 A93-18009

The effects of chronic hypoxia on human auditory system sensitivity p 89 A93-18041

Training analysis for the European Fighter Aircraft - 'A voyage into the unknown' p 98 A93-18769

Examination of the relationship between changes in the demand for civil aviation services and the volume of flight simulator training p 98 A93-18773

Advances in training technology and the role of the instructor p 98 A93-18775

The effects of structural failure on injuries sustained in the M1 Boeing 737 disaster, January 1989 p 118 A93-25201

The effects of brace position on injuries sustained in the M1 Boeing 737/400 disaster, January 1989 p 118 A93-25202

Workload or situational awareness? TLX vs. SART for aerospace systems design evaluation p 175 A93-27139

Colour head-up displays - Help or hindrance? p 187 A93-27154

The effect of low blood alcohol levels on pilot performance in a series of simulated approach and landing trials p 179 A93-27453

Assessing pilot workload - Why measure heart rate, HRV and respiration? p 168 A93-28741

Electroencephalogram epileptiform abnormalities in candidates for aircrew training p 170 A93-28757

The advent of helmet-mounted devices in the combat aircraft cockpit - An operator's viewpoint p 227 A93-30056

Helmet mounted display with multiple image sources p 227 A93-30057

The realities of using visually coupled systems for training applications p 228 A93-30063

A review of muscle atrophy in microgravity and during prolonged bed rest p 213 A93-30771

The effects of prolonged weightlessness and reduced gravity environments on human survival p 214 A93-30773

Looks can kill p 231 A93-31626

Compensating lags in head-coupled displays using head position prediction and image deflection p 231 A93-31782

Military aircrew head support system p 231 A93-31944

Peripheral arterial thrombosis related to commercial airline flights - Another manifestation of the economy class syndrome p 215 A93-32775

Hypertension and the probability of an incapacitating event over a defined period - Impact of treatment p 215 A93-32777

Cardiac pacing and aviation p 215 A93-32778

Unconsciousness in flight and its prevention p 217 A93-32787

Roles of water molecules in bacteria and viruses p 243 A93-36555

Cognitive predictors of vigilance p 287 A93-40771

Life Support and Habitability Manual ESA PSS-03-406 [SAE PAPER 921338] p 305 A93-41497

Helmet slippage during visual tracking - The effect of voluntary head movements p 389 A93-49223

Perceptual scaling of whole-body low frequency linear oscillatory motion p 379 A93-49225

Respiratory changes and structure of sleep in young high-altitude dwellers in the Andes of Peru p 383 A93-49569

Control of infection in an international airline p 407 A93-52867

Virtual landings p 410 A93-54868

Adaptation to nauseogenic motion stimuli and its application in the treatment of airsickness p 404 A93-55947

A model for the prebiotic synthesis of peptides which throws light on the origin of the genetic code and the observed chirality of life p 412 A93-56000

An introduction to the information processing components of the brain p 25 N93-10979 [RSRE-MEMO-4350]

Design guide for the ergonomic aspects of helicopter crew seating p 65 N93-13464 [ISVR-TR-209]

Life systems for a lunar base p 66 N93-13992

Autoradiographic distribution and applied pharmacological characteristics of dextromethorphan and related antitissue/anticonvulsant drugs and novel analogs p 54 N93-15009 [AD-A255607]

Occupant kinematics simulation of the Kegworth air accident p 142 N93-19662

Can injury scoring techniques provide additional information for crash investigators? p 125 N93-19663

Is axial loading a primary mechanism of injury to the lower limb in an impact aircraft accident? p 125 N93-19664

Computer aided methods for simulating occupant response to impact using OASYS DYN3D p 142 N93-19666

The design and use of automotive crash test dummies p 142 N93-19669

The application of Hybrid 3 dummy to the impact assessment of a free-fall lifeboat p 143 N93-19671

A new instrumentation system for measuring the dynamic response of the human head/neck during impact acceleration p 143 N93-19672

Disorientation and flight safety: A survey of UK Army aircrew p 133 N93-19680

Aircrew acceptance of automation in the cockpit p 144 N93-19761

The MOD (UK) integrated helmet technical demonstrator programme p 145 N93-19769

Multi-function visor p 146 N93-19770

Management of avionics data in the cockpit p 147 N93-19777

Model-based reasoning applied to cockpit warning systems p 147 N93-19778

The integration of advanced cockpit and systems design p 147 N93-19779

Helicopter night vision goggle testing in the United Kingdom p 148 N93-19917

The central executive component of working memory [AD-A258724] p 135 N93-20326

Explosives search dogs p 159 N93-21933

Development of Arabidopsis thaliana grown under microgravity conditions p 211 N93-24404

Pilot decision aiding for weapon delivery: A novel approach to fire control cueing using parallel computing p 317 N93-28853

The design and development of the new RAF standard HUD format p 318 N93-28856

The quest for an integrated flying helmet p 319 N93-28860

The physiological limitations of man in the high G environment p 319 N93-28861

Oculo-motor responses and virtual image displays p 319 N93-28862

Operator and automation capability analysis: Picking the right team p 319 N93-28864

Ergonomic development of digital map displays p 320 N93-28866

A modular head/eye platform for real-time reactive vision [OUEL-1941/92] p 320 N93-28897

Mandatory multi-engined training syllabus [CAP-601] p 363 N93-31729

Transmission of vibration through the human body to the head: A summary of experimental data [ISVR-TR-218] p 361 N93-32237

Blood lipids in aircrew recruits and in RAF aviators p 362 N93-32251

## USSR

Physiological experiments within the project AustroMir p 219 N93-24354

## UZBEKISTAN

Possible biological significance of the curvature of equipotential surfaces of gravity-force tidal variations p 324 A93-43025

## Y

## YUGOSLAVIA

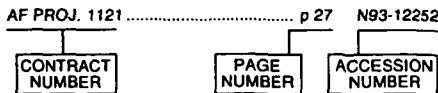
Back ache in helicopter pilots p 382 A93-49566

# CONTRACT NUMBER INDEX

AEROSPACE MEDICINE AND BIOLOGY / A Continuing Bibliography  
1993 Cumulative Index

January 1994

## Typical Contract Number Index Listing



Listings in this index are arranged alphanumerically by contract number. Under each contract number the accession numbers denoting documents that have been produced as a result of research done under the contract are shown. The accession number denotes the number by which the citation is identified in the abstract section. Preceding the accession number is the page number on which the citation may be found.

AF PROJ. 1121	p 27	N93-12252
	p 340	N93-30026
AF PROJ. 1123	p 131	N93-17857
AF PROJ. 2403	p 69	N93-14520
AF PROJ. 7184	p 353	N93-29888
	p 353	N93-29889
AF PROJ. 7231	p 31	N93-11559
	p 66	N93-13874
	p 104	N93-16033
AF PROJ. 7719	p 340	N93-29481
AF PROJ. 7930	p 123	N93-18362
AF-AFOSR-0008-89	p 23	N93-12469
AF-AFOSR-0016-89	p 26	N93-11503
AF-AFOSR-0027-91	p 219	N93-24247
AF-AFOSR-0029-91	p 14	N93-10765
AF-AFOSR-0047-90	p 217	N93-23459
AF-AFOSR-0080-91	p 224	N93-23479
AF-AFOSR-0092-90	p 330	N93-30594
AF-AFOSR-0098-90	p 335	N93-30382
AF-AFOSR-0100-91	p 259	N93-26347
AF-AFOSR-0104-90	p 361	N93-32018
AF-AFOSR-0108-90	p 361	N93-31981
AF-AFOSR-0124-91	p 31	N93-10994
	p 261	N93-26449
AF-AFOSR-0126-89	p 261	N93-26489
AF-AFOSR-0138-87	p 122	N93-18264
AF-AFOSR-0144-91	p 260	N93-26364
AF-AFOSR-0146-91	p 259	N93-26307
AF-AFOSR-0154-91	p 26	N93-11488
AF-AFOSR-0171-88	p 24	N93-10278
AF-AFOSR-0175-90	p 130	N93-17820
AF-AFOSR-0175-91	p 361	N93-32015
AF-AFOSR-0191-91	p 261	N93-26446
AF-AFOSR-0196-91	p 221	N93-24420
AF-AFOSR-0199-91	p 334	N93-30153
AF-AFOSR-0200-90	p 34	N93-12229
AF-AFOSR-0208-91	p 338	N93-31094
AF-AFOSR-0215-90	p 69	N93-14427
AF-AFOSR-0221-90	p 59	N93-14788
	p 260	N93-26435
	p 260	N93-26436
AF-AFOSR-0227-89	p 54	N93-15053
AF-AFOSR-0238-89	p 121	N93-18006
AF-AFOSR-0244-90	p 337	N93-31061
AF-AFOSR-0253-91	p 131	N93-17921
AF-AFOSR-0270-89	p 55	N93-15198
AF-AFOSR-0271-91	p 13	N93-10661
AF-AFOSR-0274-90	p 58	N93-14510
AF-AFOSR-0275-88	p 341	N93-30033
AF-AFOSR-0279-91	p 337	N93-30904
AF-AFOSR-0294-90	p 14	N93-11146

AF-AFOSR-0304-89	p 22	N93-11841
AF-AFOSR-0325-90	p 53	N93-14782
AF-AFOSR-0335-89	p 13	N93-10650
AF-AFOSR-0342-91	p 225	N93-24297
AF-AFOSR-0343-90	p 135	N93-20326
AF-AFOSR-0351-88	p 42	N93-14557
AF-AFOSR-0377-89	p 25	N93-10658
AF-AFOSR-0401-91	p 58	N93-14646
	p 260	N93-26436
	p 261	N93-26521
AF-AFOSR-0413-91	p 285	N93-28759
AF-AFOSR-0414-89	p 260	N93-26349
AF-AFOSR-0428-91	p 336	N93-30422
AF-AFOSR-0429-89	p 60	N93-15329
AF-AFOSR-0437-89	p 59	N93-15067
AF-AFOSR-0490-89	p 336	N93-30494
AF-AFOSR-1051-91	p 235	N93-24067
AF-AFOSR-83-0366	p 204	A93-33031
AF-AFOSR-90-0095	p 388	A93-51959
AF-AFOSR-91-0057	p 98	A93-20275
AF-AFOSR-91-0112	p 191	A93-29112
AF-AFOSR-91-0150	p 102	A93-19984
BMFT-01-QV-8712	p 251	A93-35455
BMFT-50-QV-8846	p 210	N93-24401
DA PROJ. MM3-3-P-30	p 121	N93-18209
DA PROJ. M00-95	p 121	N93-18210
DA PROJ. M00-96	p 225	N93-24319
	p 225	N93-24319
DA PROJ. RR0-4108	p 50	N93-13116
DA PROJ. 1L1-62716-AH-70	p 58	N93-14416
	p 104	N93-16048
	p 321	N93-28941
DA PROJ. 1L1-62786-AH-98	p 34	N93-12423
	p 335	N93-30196
DA PROJ. 2Q1-62785-A-790	p 366	N93-32012
DA PROJ. 2Q1-62785-A-791	p 26	N93-11779
DA PROJ. 2Q2-63007-A-792	p 363	N93-32011
DA PROJ. 2Q2-63007-A-793	p 30	N93-10261
DA PROJ. 2930	p 353	N93-30167
DA PROJ. 3M1-61102-BS-11	p 54	N93-15009
DA PROJ. 3M1-61102-BS-12	p 50	N93-12945
DA PROJ. 3M1-61102-BS-15	p 69	N93-14161
	p 95	N93-16187
	p 283	N93-28122
	p 334	N93-29820
DA PROJ. 3M1-62787-A-874	p 53	N93-14535
DA PROJ. 3M1-62787-A-875	p 254	N93-25629
DA PROJ. 3M1-62787-A-878	p 52	N93-14163
	p 171	N93-20563
DA PROJ. 3M1-62787-A-879	p 235	N93-23992
	p 226	N93-24431
	p 268	N93-26265
DA PROJ. 3M1-62787-A-8879	p 255	N93-26218
DA PROJ. 3M1-62787-A-897	p 283	N93-27923
DA PROJ. 3M2-63002-D-819	p 128	N93-20384
DA PROJ. 3M2-63002-D-840	p 13	N93-10709
DA PROJ. 3M2-63002-F-995	p 58	N93-14600
DA PROJ. 3M4-63807-D-836	p 52	N93-14103
	p 123	N93-18295
DA PROJ. 301-61102-BS-15	p 54	N93-15006
DAAH01-91-C-R240	p 52	N93-14210
DAAL03-86-D-0001	p 363	N93-32011
DAAL03-87-K-0004	p 330	N93-29915
DAAL03-89-C-0031	p 192	A93-29118
DAAL03-89-K-0064	p 245	N93-25764
DAAL03-89-K-0121	p 42	N93-13863
DAAL03-89-K-0178	p 255	N93-25944
DAAL03-90-G-0191	p 71	N93-15363
DAAL03-91-G-0325	p 219	N93-24238
DAEA18-90-C-0044	p 390	A93-49393
	p 390	A93-49398
	p 32	N93-11783
DAH35-89-D-0030	p 70	N93-14651
DAMD17-83-C-3172	p 52	N93-14163
DAMD17-85-C-5206	p 115	A93-21685
	p 117	A93-24043
DAMD17-86-C-6161	p 50	N93-12945
DAMD17-86-C-6260	p 42	N93-14648
	p 358	N93-32035
DAMD17-87-C-7202	p 280	A93-41120
	p 280	A93-41121
DAMD17-88-C-8032	p 52	N93-14163
DAMD17-88-C-8058	p 123	N93-18295

DAMD17-88-C-8169	p 22	N93-11561
DAMD17-88-Z-8807	p 130	A93-25209
DAMD17-89-C-9027	p 171	N93-20563
DAMD17-89-C-9073	p 385	A93-52302
	p 385	A93-52303
DAMD17-90-C-0124	p 54	N93-15009
DAMD17-90-Z-0054	p 54	N93-15006
DAMD17-91-C-1076	p 95	N93-16187
DAMD17-91-C-1081	p 229	A93-30067
DAMD17-91-C-1105	p 297	A93-41408
DAMD17-91-C-1112	p 334	N93-29820
DAMD17-91-Z-1002	p 53	N93-14535
DAMD17-92-J-2003	p 69	N93-14161
DARA-FKZ-01-QV-8735	p 401	A93-55165
DARA-50-QV-8857-5	p 111	A93-21901
DE-AC02-76CH-00016	p 43	A93-13935
	p 5	N93-10461
	p 5	N93-11630
	p 115	N93-19751
DE-AC02-80RA-50219	p 41	N93-13503
	p 41	N93-13520
	p 95	N93-16166
	p 207	N93-22913
	p 211	N93-24455
DE-AC02-83CH-10093	p 137	A93-25309
	p 82	N93-17189
	p 276	N93-28890
DE-AC03-76SF-00098	p 82	N93-17359
DE-AC04-76DP-00789	p 97	N93-17230
	p 237	N93-24502
	p 264	N93-25318
	p 330	N93-30483
DE-AC04-76EV-01013	p 104	A93-20779
	p 13	N93-10626
DE-AC05-76OR-00033	p 127	N93-19838
DE-AC05-84OR-21400	p 137	A93-25309
	p 6	N93-12315
	p 237	N93-25099
	p 211	N93-25104
	p 264	N93-25415
	p 246	N93-26587
	p 276	N93-28890
DE-AC06-76RL-01830	p 5	N93-10834
	p 63	N93-12712
DE-AC07-76ID-01570	p 137	A93-25309
	p 321	N93-28942
	p 43	N93-15211
DE-BI79-90BP-04293	p 276	N93-28848
DE-FG01-89CE-34023	p 276	N93-28651
DE-FG02-86ER-60448	p 23	N93-11873
DE-FG02-87ER-60561	p 95	N93-15900
DE-FG02-88ER-13903	p 329	A93-44941
DE-FG02-88ER-60631	p 6	N93-12266
DE-FG02-90ER-61091	p 96	N93-16441
DE-FG02-91ER-20021	p 5	N93-10835
DE-FG02-91ER-20033	p 276	N93-29181
DE-FG02-91ER-61228	p 22	N93-11445
DE-FG05-87ER-60503	p 40	N93-13034
	p 40	N93-13083
DE-FG05-88ER-60707	p 218	N93-24009
DE-FG05-91ER-81235	p 246	N93-26587
DE-FG09-84ER-13188	p 39	N93-12768
DE-FG21-90MC-27225	p 6	N93-12482
	p 40	N93-13269
DFG-716/1-2	p 331	A93-42191
DHHS-R59-CCR-902269	p 283	N93-27409
DLA900-86-C-2045	p 30	N93-10217
	p 30	N93-10288
	p 33	N93-12079
	p 317	N93-28757
	p 284	N93-28758
DNA001-86-C-0308	p 351	N93-29484
DNA001-88-C-0207	p 59	N93-15216
DRET-87-219	p 387	A93-52619
DRET-88-069	p 78	A93-20030
DRET-89-176	p 92	A93-20026
DRET-89-237	p 212	A93-30280
DTCCG39-89-C-E10G56	p 107	N93-17697
DTFA01-89-C-00057	p 188	A93-27167
DTFA01-90-C-00042	p 99	N93-16189
	p 288	N93-27103
DTFA01-92-Y-01005	p 234	N93-23647
DTFA02-90-90125	p 314	N93-27851



## DTFR53-82-C-00254

DTFR53-82-C-00254 ..... p 351 N93-29675  
DTRS-57-88-C-00078 ..... p 289 A93-39573  
DTRS-57-88-C-0078TD39 ..... p 61 A93-14377  
EEC-3075 ..... p 157 N93-20848  
EPA-CR-818696-01-0 ..... p 273 A93-41388  
EPA-68-D0-0101 ..... p 12 N93-10438  
EPA-68-D2-4544 ..... p 194 N93-21215  
EPA-68-08-0023 ..... p 64 N93-12983  
ESA-9254/90/NL/FG ..... p 309 A93-41553  
FAA PROJ. AM-A-91-PHY-144 ..... p 253 N93-25214  
FAA PROJ. AM-C-90/91-HRR-122 ..... p 218 N93-24088  
FAA PROJ. AM-C-92-HRR-122 ..... p 257 N93-25203  
FAA PROJ. AM-C-92-HRR-125 ..... p 257 N93-25213  
FFWF PROJECT P-6221 ..... p 279 A93-41117  
FFWF PROJECT P-7556-BIO ..... p 203 A93-32850  
FFWF PROJECT P-8475-MOB ..... p 354 A93-43792  
F19628-89-C-0001 ..... p 322 N93-29340  
F19628-90-C-0002 ..... p 58 N93-14580  
F30602-91-C-0028 ..... p 333 N93-29421  
F33615-86-C-4505 ..... p 191 A93-29112  
F33615-87-C-0603 ..... p 317 N93-28464  
F33615-87-C-1436 ..... p 130 N93-17816  
F33615-87-D-0609 ..... p 61 A93-14727  
F33615-87-D-0626 ..... p 379 A93-49221  
F33615-88-C-0014 ..... p 246 N93-26259  
F33615-88-C-0015 ..... p 317 N93-28479  
F33615-88-C-0015 ..... p 389 A93-52501  
F33615-88-C-0015 ..... p 100 N93-17684  
F33615-88-C-0015 ..... p 132 N93-18273  
F33615-88-C-3612 ..... p 135 N93-19956  
F33615-89-C-0532 ..... p 314 N93-27927  
F33615-89-C-0532 ..... p 228 A93-30065  
F33615-89-C-0603 ..... p 348 A93-42840  
F33615-89-C-0603 ..... p 50 N93-12905  
F33615-90-C-0005 ..... p 335 N93-30400  
F33615-90-C-0005 ..... p 347 A93-42814  
F33615-90-C-0005 ..... p 57 N93-12662  
F33615-90-C-0005 ..... p 139 N93-18029  
F33615-90-C-0005 ..... p 148 N93-20050  
F33615-90-C-0005 ..... p 353 N93-29924  
F33615-90-C-0005 ..... p 341 N93-30542  
F33657-91-C-2211 ..... p 195 N93-21753  
F41624-92-C-6007 ..... p 406 A93-52664  
F49620-88-C-0053 ..... p 160 A93-27192  
F49620-90-C-0077 ..... p 25 N93-10662  
F49620-92-C-0013 ..... p 260 N93-26391  
F49620-92-J-0016 ..... p 335 N93-30192  
F49620-92-J-0119 ..... p 260 N93-26356  
F49620-92-J-0156 ..... p 265 N93-25778  
F49620-92-J-0169 ..... p 341 N93-30163  
F49620-92-J-0188 ..... p 335 N93-30421  
F49620-92-J-0205 ..... p 337 N93-30908  
F49620-92-J-0214 ..... p 335 N93-30160  
F49620-92-J-0363 ..... p 336 N93-30613  
G966016-J45 ..... p 207 N93-23069  
G966016-J45 ..... p 208 N93-23070  
G966016-J45 ..... p 208 N93-23071  
G966016-J45 ..... p 208 N93-23080  
G966016-J45 ..... p 209 N93-23081  
G966016-J45 ..... p 209 N93-23082  
HAG ORDER 966016-J45-EAGLE ..... p 209 N93-23081  
MDA903-85-C-0332 ..... p 394 A93-52503  
MDA903-86-C-0169 ..... p 62 A93-15665  
MDA903-86-C-0384 ..... p 180 A93-27454  
MDA903-86-C-0384 ..... p 366 N93-32012  
MDA903-86-C-0412 ..... p 26 N93-11779  
MDA903-87-C-0523 ..... p 30 N93-10261  
MDA903-87-C-0523 ..... p 35 N93-12508  
MDA903-87-C-0523 ..... p 35 N93-12509  
MDA903-87-C-0523 ..... p 63 N93-12545  
MDA903-87-C-0523 ..... p 63 N93-12609  
MDA903-89-C-0003 ..... p 235 N93-24001  
MDA903-89-C-0003 ..... p 230 A93-30287  
MDA903-89-C-0003 ..... p 25 N93-10719  
MDA903-89-C-0003 ..... p 35 N93-12491  
MDA903-92-D-0025 ..... p 354 N93-30590  
MIPR-251100-1-E27A57 ..... p 341 N93-30426  
MIPR-91MM1533 ..... p 14 N93-10796  
MIPR-91M1502 ..... p 13 N93-10709  
MOESC-63540445 ..... p 74 A93-18008  
NAGW-1128 ..... p 223 A93-32004  
NAGW-1114 ..... p 412 A93-55997  
NAGW-1196 ..... p 79 A93-20661  
NAGW-1196 ..... p 329 A93-44933  
NAGW-1197 ..... p 308 A93-41547  
NAGW-1244 ..... p 79 A93-20660  
NAGW-1508 ..... p 273 A93-41075  
NAGW-1527 ..... p 273 A93-41075  
NAGW-1600 ..... p 329 A93-44941  
NAGW-1600 ..... p 358 A93-46472  
NAGW-1600 ..... p 397 A93-52878  
NAGW-1660 ..... p 329 A93-44939  
NAGW-17 ..... p 286 A93-39571  
NAGW-1803 ..... p 203 A93-33026  
NAGW-1823 ..... p 38 A93-16544  
NAGW-1849 ..... p 329 A93-44941

NAGW-1863 ..... p 94 A93-20658  
NAGW-1911 ..... p 197 A93-28376  
NAGW-1941 ..... p 110 A93-17984  
NAGW-1953 ..... p 110 A93-17984  
NAGW-1998 ..... p 285 N93-29041  
NAGW-2147 ..... p 272 A93-40308  
NAGW-2205 ..... p 109 A93-17979  
NAGW-2245 ..... p 185 A93-27038  
NAGW-2356 ..... p 307 A93-41517  
NAGW-2356 ..... p 308 A93-41545  
NAGW-2356 ..... p 282 A93-41546  
NAGW-2370 ..... p 109 A93-17979  
NAGW-2436 ..... p 269 N93-26157  
NAGW-2546 ..... p 313 N93-27847  
NAGW-2818 ..... p 74 A93-18005  
NAGW-2818 ..... p 74 A93-18007  
NAGW-2818 ..... p 41 N93-13457  
NAGW-2872 ..... p 110 N93-15825  
NAGW-2872 ..... p 110 N93-16709  
NAGW-2881 ..... p 322 N93-28895  
NAGW-2940 ..... p 397 A93-52878  
NAGW-2950 ..... p 105 N93-16840  
NAGW-593 ..... p 231 A93-31517  
NAGW-606 ..... p 38 A93-16544  
NAGW-70 ..... p 330 N93-30665  
NAGW-825 ..... p 78 A93-20033  
NAGW-825 ..... p 272 A93-40308  
NAGW-834 ..... p 38 A93-16544  
NAGW-860 ..... p 132 N93-18359  
NAGW-949 ..... p 152 A93-27775  
NAGW-949 ..... p 203 A93-33026  
NAGW-949 ..... p 328 A93-44903  
NAG1-1008 ..... p 136 A93-23846  
NAG1-1296 ..... p 286 A93-39571  
NAG1-690 ..... p 61 A93-14377  
NAG10-0106 ..... p 172 N93-20736  
NAG2-12 ..... p 61 A93-14377  
NAG2-195 ..... p 394 A93-52502  
NAG2-210 ..... p 151 A93-26500  
NAG2-210 ..... p 215 A93-32474  
NAG2-210 ..... p 204 A93-33031  
NAG2-210 ..... p 377 A93-49294  
NAG2-210 ..... p 78 A93-20033  
NAG2-210 ..... p 399 A93-55933  
NAG2-210 ..... p 176 A93-27144  
NAG2-210 ..... p 179 A93-27195  
NAG2-210 ..... p 257 A93-36229  
NAG2-362 ..... p 323 A93-42192  
NAG2-384 ..... p 326 A93-44179  
NAG2-386 ..... p 37 A93-14974  
NAG2-392 ..... p 78 A93-20036  
NAG2-392 ..... p 326 A93-44178  
NAG2-410 ..... p 281 A93-41169  
NAG2-414 ..... p 202 A93-32749  
NAG2-414 ..... p 204 A93-33043  
NAG2-414 ..... p 205 A93-33045  
NAG2-414 ..... p 222 N93-24763  
NAG2-414 ..... p 282 N93-27102  
NAG2-414 ..... p 282 N93-27113  
NAG2-426 ..... p 182 A93-26887  
NAG2-427 ..... p 50 N93-13061  
NAG2-438 ..... p 201 A93-32113  
NAG2-438 ..... p 201 A93-32124  
NAG2-438 ..... p 202 A93-32651  
NAG2-438 ..... p 202 A93-32652  
NAG2-438 ..... p 204 A93-33035  
NAG2-438 ..... p 339 A93-44923  
NAG2-438 ..... p 404 A93-52721  
NAG2-448 ..... p 328 A93-44930  
NAG2-448 ..... p 329 A93-44931  
NAG2-448 ..... p 207 N93-22800  
NAG2-555 ..... p 326 A93-44183  
NAG2-555 ..... p 327 A93-44184  
NAG2-568 ..... p 37 A93-14970  
NAG2-574 ..... p 114 N93-19377  
NAG2-610 ..... p 51 N93-13449  
NAG2-623 ..... p 114 N93-18608  
NAG2-656 ..... p 394 A93-52502  
NAG2-656 ..... p 181 N93-20908  
NAG2-671 ..... p 398 A93-55168  
NAG2-716 ..... p 61 A93-14377  
NAG2-722 ..... p 141 N93-19039  
NAG2-750 ..... p 225 N93-24192  
NAG2-782 ..... p 399 A93-55458  
NAG3-1027 ..... p 174 N93-22188  
NAG3-1027 ..... p 246 N93-27085  
NAG5-1572 ..... p 65 N93-13717  
NAG8-807 ..... p 329 A93-44933  
NAG8-807 ..... p 276 N93-28415  
NAG9-117 ..... p 214 A93-32176  
NAG9-117 ..... p 215 A93-32774  
NAG9-117 ..... p 124 N93-18596  
NAG9-117 ..... p 363 N93-32364  
NAG9-118 ..... p 116 A93-24037  
NAG9-130 ..... p 93 A93-20039  
NAG9-241 ..... p 297 A93-41406

NAG9-249 ..... p 85 A93-17542  
NAG9-267 ..... p 44 A93-14968  
NAG9-284 ..... p 303 A93-41474  
NAG9-291 ..... p 105 N93-16699  
NAG9-295 ..... p 382 A93-49403  
NAG9-372 ..... p 184 A93-27034  
NAG9-372 ..... p 193 A93-29135  
NAG9-372 ..... p 251 A93-35493  
NAG9-372 ..... p 251 A93-35494  
NAG9-375 ..... p 141 N93-18517  
NAG9-422 ..... p 375 A93-49208  
NAG9-442 ..... p 193 A93-29135  
NAG9-443 ..... p 387 A93-49404  
NAG9-446 ..... p 192 A93-29132  
NAG9-461 ..... p 297 A93-41406  
NAG9-505 ..... p 258 N93-26082  
NAG9-562 ..... p 277 N93-29216  
NAG9-582 ..... p 365 N93-31844  
NAG9-634 ..... p 217 N93-22655  
NASA ORDER H-18763-D ..... p 202 A93-32243  
NASA ORDER T-9310-R ..... p 41 N93-13327  
NASW-4102 ..... p 244 N93-25195  
NASW-4292 ..... p 55 N93-15583  
NASW-4324 ..... p 123 N93-18376  
NASW-4435 ..... p 108 N93-17710  
NASW-4435 ..... p 83 N93-17780  
NASW-4435 ..... p 108 N93-17805  
NASW-4435 ..... p 108 N93-17806  
NASW-4435 ..... p 138 N93-17970  
NASW-4435 ..... p 138 N93-17971  
NASW-4435 ..... p 139 N93-17973  
NASW-4435 ..... p 139 N93-18019  
NASW-4435 ..... p 140 N93-18113  
NASW-4435 ..... p 140 N93-18153  
NASW-4435 ..... p 140 N93-18156  
NASW-4435 ..... p 352 N93-29760  
NASW-4470 ..... p 310 N93-27100  
NASW-4470 ..... p 310 N93-27101  
NAS1-18687 ..... p 28 A93-12222  
NAS1-18788 ..... p 388 A93-52187  
NAS1-18847 ..... p 9 A93-10337  
NAS1-19345 ..... p 28 A93-13357  
NAS10-11624 ..... p 44 A93-14975  
NAS10-11624 ..... p 279 A93-40549  
NAS2-12852 ..... p 4 N93-10085  
NAS2-12852 ..... p 139 N93-18111  
NAS2-12852 ..... p 182 A93-26887  
NAS2-12927 ..... p 292 A93-41323  
NAS2-12927 ..... p 178 A93-27185  
NAS2-12927 ..... p 222 N93-24738  
NAS2-13210 ..... p 182 A93-26887  
NAS2-13345 ..... p 304 A93-41484  
NAS7-1069 ..... p 149 N93-20065  
NAS7-932 ..... p 364 A93-45598  
NAS7-969 ..... p 65 N93-13450  
NAS8-36407 ..... p 42 N93-13612  
NAS8-36407 ..... p 195 N93-22002  
NAS8-36955 ..... p 311 N93-27720  
NAS8-36955 ..... p 23 N93-12427  
NAS8-36955 ..... p 40 N93-12901  
NAS8-36955 ..... p 40 N93-12949  
NAS8-37814 ..... p 64 N93-12966  
NAS8-37814 ..... p 359 N93-32354  
NAS8-37814 ..... p 372 N93-32356  
NAS8-37814 ..... p 359 N93-32365  
NAS8-38038 ..... p 301 A93-41443  
NAS8-38490 ..... p 301 A93-41443  
NAS8-38781 ..... p 64 N93-12990  
NAS8-39843 ..... p 266 N93-25888  
NAS8-39843 ..... p 234 N93-22663  
NAS8-50000 ..... p 267 N93-26088  
NAS9-14546 ..... p 294 A93-41365  
NAS9-15343 ..... p 399 A93-55933  
NAS9-16037 ..... p 403 A93-55941  
NAS9-16044 ..... p 386 A93-52617  
NAS9-17267 ..... p 44 A93-14968  
NAS9-17403 ..... p 47 A93-16158  
NAS9-17413 ..... p 328 A93-44928  
NAS9-17416 ..... p 328 A93-44929  
NAS9-17745 ..... p 84 A93-17531  
NAS9-17822 ..... p 79 A93-20661  
NAS9-17900 ..... p 379 A93-49222  
NAS9-18057 ..... p 302 A93-41463  
NAS9-18057 ..... p 187 A93-27155  
NAS9-18057 ..... p 187 A93-27157  
NAS9-18057 ..... p 187 A93-27160  
NAS9-18057 ..... p 188 A93-27170  
NAS9-18057 ..... p 303 A93-41464  
NAS9-18057 ..... p 34 N93-12195  
NAS9-18057 ..... p 34 N93-12211  
NAS9-18057 ..... p 96 N93-16619  
NAS9-18057 ..... p 234 N93-23129  
NAS9-18057 ..... p 258 N93-25736  
NAS9-18057 ..... p 321 N93-29044  
NAS9-18057 ..... p 321 N93-29324  
NAS9-18057 ..... p 179 A93-27188

## CONTRACT NUMBER INDEX

# CONTRACT NUMBER INDEX

RTOP 199-61-12-42

NAS9-18128	p 85	A93-17538	NIH-G12-RR-03059-01A1	p 329	A93-44935	NSF EAR-86-09782	p 110	A93-17984
NAS9-18348	p 304	A93-41483	NIH-HD-00681	p 280	A93-41120	NSF EAR-90-05744	p 273	A93-41075
NAS9-18361	p 303	A93-41478		p 280	A93-41121	NSF EAR-90-18468	p 74	A93-18005
	p 274	N93-27122	NIH-HD-06016	p 201	A93-32113		p 74	A93-18007
	p 275	N93-27360		p 202	A93-32651		p 397	A93-53291
NAS9-18440	p 213	A93-30285		p 202	A93-32652		p 41	N93-13457
NAS9-18492	p 334	N93-29651		p 204	A93-33035	NSF EAR-91-18011	p 411	A93-53289
NA89AA-D-SG-053	p 43	N93-15208		p 339	A93-44923	NSF INT-86-2045	p 273	A93-41075
NCA2-225	p 55	A93-14098		p 404	A93-52721	NSF INT-87-12007	p 325	A93-43795
	p 339	A93-44922	NIH-HL-01998	p 279	A93-41118	NSF INT-89-22466	p 375	A93-49208
NCA2-248	p 98	A93-20275	NIH-HL-07212	p 323	A93-42187	NSF IRI-90-03252	p 214	A93-31267
NCA2-413	p 97	A93-17974	NIH-HL-07249	p 323	A93-42193	NSF MCB-91-17694	p 153	A93-27799
NCA2-468	p 102	A93-19987	NIH-HL-07449	p 279	A93-41118	NSF MSS-85-52702	p 61	A93-14377
NCC2-100	p 327	A93-44879	NIH-HL-07467	p 79	A93-20038	NSF MSS-89-10095	p 136	A93-23846
	p 328	A93-44880	NIH-HL-07625	p 379	A93-49221	NSF MSS-90-23491	p 184	A93-27034
	p 357	A93-46468	NIH-HL-07776	p 151	A93-26500	NSF OCE-81-18897	p 397	A93-53285
	p 357	A93-46469	NIH-HL-14985	p 117	A93-24043	NSF OCE-83-12036	p 397	A93-53285
	p 357	A93-46470		p 280	A93-41120	NSF OCE-85-12832	p 397	A93-53285
NCC2-12	p 329	A93-44935		p 280	A93-41121	NSF OCE-86-01316	p 397	A93-53285
NCC2-167	p 400	A93-55937		p 326	A93-44181	NSF OCE-90-02366	p 397	A93-53285
NCC2-220	p 324	A93-42450	NIH-HL-16022	p 79	A93-20038	NSF OCE-90-02532	p 330	N93-30665
NCC2-229	p 271	A93-38451	NIH-HL-17731	p 111	A93-21684	NSG-1414	p 231	A93-31517
NCC2-253	p 94	A93-20659		p 117	A93-24043	NSG-7278	p 358	A93-46471
NCC2-307	p 97	A93-17673		p 323	A93-42187	NWO-SON-328-050	p 1	A93-11150
NCC2-370	p 79	A93-20661		p 331	A93-42188	NWO-783-380-100	p 376	A93-49214
NCC2-377	p 389	A93-52506	NIH-HL-20634	p 281	A93-41168	N00014-85-C-0013	p 225	N93-24227
NCC2-414	p 266	N93-26047	NIH-HL-33567	p 151	A93-26500	N00014-85-K-0124	p 224	N93-23986
NCC2-455	p 329	A93-44935	NIH-HL-33782	p 323	A93-42192	N00014-86-K-0678	p 364	N93-32064
NCC2-495	p 209	N93-23233	NIH-HL-37235	p 8	A93-10332	N00014-86-K-0680	p 390	A93-49393
NCC2-517	p 191	A93-29111	NIH-HL-39818	p 281	A93-41168		p 390	A93-49398
	p 192	A93-29132	NIH-HL-39966	p 323	A93-42193	N00014-87-C-0790	p 32	N93-11812
	p 182	A93-26887	NIH-HL-40273	p 80	A93-20663	N00014-89-J-1540	p 50	N93-13116
	p 292	A93-41323	NIH-HL-44678	p 79	A93-20038	N00014-89-J-3146	p 69	N93-14548
NCC2-541	p 201	A93-32115	NIH-HL-46481	p 326	A93-44181	N00014-89-J-3149	p 122	N93-18252
	p 201	A93-32116	NIH-K04-AG-00369	p 80	A93-20665	N00014-90-C-0053	p 14	N93-11193
	p 243	A93-36557	NIH-MH-28783	p 204	A93-33031	N00014-90-C-0220	p 225	N93-24227
NCC2-592	p 189	A93-27455	NIH-MO1-RR-00073	p 280	A93-41122	N00014-90-J-1307	p 52	N93-14109
NCC2-607	p 209	N93-23169	NIH-MO1-RR-00088	p 152	A93-27224	N00014-90-J-1492	p 26	N93-11415
NCC2-613	p 257	A93-36229	NIH-NEI-R01-EY07046	p 103	A93-19989	N00014-90-J-1626	p 283	N93-27654
NCC2-614	p 244	N93-25242	NIH-NC1-AG-9-2216	p 115	A93-21686	N00014-90-J-1648	p 284	N93-28293
NCC2-628	p 303	A93-41473	NIH-NS-21231	p 204	A93-33031	N00014-90-J-1664	p 12	N93-10271
NCC2-632	p 102	A93-19986	NIH-P01-AG-4402-05	p 115	A93-21686	N00014-90-J-1917	p 153	A93-27799
	p 179	A93-27194	NIH-R01-MH-43924	p 97	A93-17974	N00014-90-J-4014	p 263	A93-35536
	p 230	A93-30454	NIH-RR-00088-24	p 204	A93-33031	N00014-91-C-0044	p 254	N93-25900
NCC2-643	p 232	A93-33443	NIH-RR-00165	p 201	A93-32113	N00014-91-C-0190	p 54	N93-15192
NCC2-86	p 232	A93-33446	NIH-RR-00350	p 93	A93-20039		p 333	N93-29509
	p 233	A93-33449	NIH-RR-02558	p 93	A93-20039	N00014-91-J-1290	p 153	A93-27799
NCC8-17	p 303	A93-41473	NIH-RR-02719	p 115	A93-21686	N00014-91-J-1316	p 224	N93-23960
NCC9-16	p 184	A93-27034	NIH-RR-05818	p 202	A93-32749	N00014-91-J-1540	p 99	N93-16111
	p 149	N93-20314		p 205	A93-33045		p 123	N93-18363
NERC-GR/3/7779	p 74	A93-18009	NIH-R01-AG-08322	p 80	A93-20665	N00014-91-J-1598	p 42	N93-14532
NFR-G-GU-3865	p 325	A93-43795	NIH-R01-AR-18140	p 116	A93-21687	N00014-91-J-1653	p 39	N93-12871
NGL-22-009-640	p 61	A93-14377	NIH-R23-3026	p 203	A93-33027	N00014-91-J-1903	p 258	N93-25654
NGR-03-018-148	p 412	A93-55998	NIH-R29-GM-39723	p 88	A93-18036	N00014-91-J-4168	p 27	N93-12225
NGR-05-007-407	p 272	A93-40308	NIH-S07-RR-07002	p 399	A93-55458	N00014-92-J-1164	p 122	N93-18223
NGR-33-018-148	p 108	A93-17824	NIH-T32-HL-07625	p 379	A93-49221	N00014-92-J-1244	p 334	N93-29620
	p 268	A93-36554	NIH-T32-MH-19761-0851	p 201	A93-32119	N00014-92-J-1558	p 50	N93-13252
NGR-44-005-002	p 109	A93-17977	NIH-1-R01-AG06072	p 94	A93-20658	N00019-88-C-0288	p 320	N93-28870
NGT-05-004-801	p 118	A93-25206	NIH-1-R01-AG-08521-01	p 384	A93-52299	N00039-91-C-0001	p 173	N93-22163
NGT-44-005-803	p 266	N93-26061	NIH-5-R24-RR-02170	p 390	A93-49398	N0014-89-J-1700	p 375	A93-49207
	p 255	N93-26068	NIOSH-R43-OH02097	p 338	N93-31138	PHS-AA-06093	p 46	A93-16151
	p 245	N93-26069	NR PROJ. MM3-3-P-30	p 140	N93-18293	PHS-R01-HG-00312-03	p 358	A93-47099
	p 245	N93-26073		p 132	N93-18294	PHS-R03-OH0-2821-01	p 286	N93-29199
	p 267	N93-26076	NR PROJ. MR0-4101	p 336	N93-30882	PR-91-007-008	p 221	N93-24590
	p 246	N93-26077	NR PROJ. M00-96	p 120	N93-17896	PROJ. IR-90-2	p 43	N93-15208
NGT-50206	p 44	A93-14968		p 131	N93-17919	PROJ. K7-17	p 51	N93-13449
NGT-50379	p 192	A93-29132		p 131	N93-18205	PROJ. MM3-3-P-30	p 171	N93-20580
NGT-50493	p 78	A93-20036		p 122	N93-18280	PROJ. M00-99	p 172	N93-20587
	p 326	A93-44178	NR PROJ. M00-99	p 120	N93-17926	PROJ. R/C-S-27	p 43	N93-15208
NGT-50512	p 394	A93-52406	NR PROJ. RR0-4204	p 52	N93-14109	RICIS PROJ. SE-16	p 149	N93-20314
NGT-70124	p 28	A93-12222	NR PROJ. 3M1-61102-BS-87	p 14	N93-10796	RTOP 107-30-31	p 35	N93-12319
NIH-AA-07035	p 384	A93-52299	NS-072226	p 173	N93-22163	RTOP 141-20-0F	p 246	N93-27085
NIH-AG-03934	p 79	A93-20662	NSERC-A-2181	p 231	A93-31533	RTOP 199-06-16-11	p 50	N93-13023
NIH-AG-06537	p 323	A93-42193	NSERC-A-2427	p 138	A93-25482		p 124	N93-18381
M'H-AG-06836	p 94	A93-20659	NSF ASC-89-20219	p 390	A93-49398	RTOP 199-14-11-13	p 280	A93-41119
NIH-AG-07719	p 79	A93-20662	NSF BNS-85-11685	p 339	A93-44940		p 380	A93-49292
NIH-AG-08589	p 56	A93-15663	NSF BNS-89-08512	p 257	A93-36229	RTOP 199-14-12-04	p 380	A93-49291
NIH-AR-30346	p 326	A93-44183	NSF BNS-89-19645	p 280	A93-41120		p 380	A93-49292
	p 327	A93-44184		p 280	A93-41121		p 381	A93-49295
NIH-AR-36266	p 202	A93-32749	NSF BNS-90-21081	p 179	A93-27196	RTOP 199-15-11-14	p 280	A93-41119
	p 205	A93-33045	NSF BSR-84-02051	p 152	A93-27775	RTOP 199-16-11-08	p 47	A93-16158
	p 80	A93-20663		p 203	A93-33026		p 85	A93-17538
NIH-AR-37984	p 205	A93-33045		p 328	A93-44903	RTOP 199-16-12-34	p 388	A93-51959
NIH-AR-39998	p 202	A93-32749	NSF BSR-86-13583	p 272	A93-40308	RTOP 199-16-12-37	p 55	A93-14119
	p 204	A93-33043	NSF BSR-87-09242	p 152	A93-27775		p 174	A93-26950
	p 205	A93-33045		p 203	A93-33026		p 141	N93-19104
NIH-CA-23248	p 329	A93-44934		p 328	A93-44903	RTOP 199-18-12-07	p 242	A93-35498
	p 358	A93-46606	NSF BSR-88-18133	p 400	A93-55999		p 6	N93-12014
NIH-CA-24385	p 329	A93-44934	NSF CCR-88-13632	p 157	N93-20848		p 255	N93-26133
NIH-CA-30187	p 80	A93-20663	NSF CDA-88-06866	p 291	A93-41319	RTOP 199-21-12	p 281	A93-41169
NIH-ES-01247	p 308	A93-41545	NSF CDA-88-22719	p 192	A93-29118	RTOP 199-22-12	p 281	A93-41169
NIH-ES-04872	p 308	A93-41545	NSF CHE-85-06377	p 412	A93-55998	RTOP 199-22-22	p 281	A93-41169
NIH-EY-01711	p 55	A93-14097	NSF CHE-90-00187	p 325	A93-43795	RTOP 199-22-32	p 281	A93-41169
NIH-GCRC5-M01-RR00888	p 94	A93-20658	NSF DMB-90-16973	p 269	A93-36561	RTOP 199-22-44	p 281	A93-41169
NIH-GM-08400	p 323	A93-42193	NSF DMC-88-57851	p 291	A93-41319	RTOP 199-26-12-38	p 380	A93-49291
NIH-GM-41635	p 38	A93-16481	NSF DMS-90-05833	p 157	N93-20848	RTOP 199-61-12-42	p 33	N93-12018

**RTOP 476-14-03****CONTRACT NUMBER INDEX**

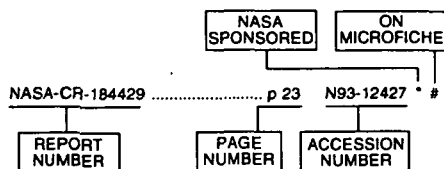
RTOP 476-14-03 .....	p 274	A93-41551
RTOP 505-64-29 .....	p 236	N93-24490
RTOP 505-64-36 .....	p 232	A93-33444
RTOP 506-71-51 .....	p 55	A93-14119
	p 174	A93-26950
RTOP 674-23-08-17 .....	p 203	A93-32850
RTOP-506-47 .....	p 55	A93-14097
SBIR-06.05-4100 .....	p 65	N93-13450
SBIR-08.15-1315 .....	p 42	N93-13612
SMRC-07490-5A .....	p 275	N93-27989
SNSF-3,200,0092,85 .....	p 279	A93-41117
SNSF-3,338,0,86 .....	p 200	A93-32071
SNSRC-4426-3011 .....	p 275	N93-27989
W-31-109-ENG-38 .....	p 137	A93-25309
	p 96	N93-16552
	p 82	N93-17189
	p 210	N93-24028
W-7405-ENG-36 .....	p 5	N93-10628
	p 49	N93-12566
	p 51	N93-13522
	p 217	N93-22774
	p 253	N93-25186
W-7405-ENG-48 .....	p 43	A93-13774
	p 5	N93-10974

# REPORT NUMBER INDEX

AEROSPACE MEDICINE AND BIOLOGY / A Continuing Bibliography  
1993 Cumulative Index

January 1994

## Typical Report Number Index Listing



Listings in this index are arranged alphanumerically by report number. The page number indicates the page on which the citation is located. The accession number denotes the number by which the citation is identified. An asterisk (\*) indicates that the item is a NASA report. A pound sign (#) indicates that the item is available on microfiche.

A-90237 ..... p 35 N93-12319 \* #  
A-91204 ..... p 236 N93-24490 \* #  
A-91244 ..... p 141 N93-19104 \* #  
A-92113 ..... p 255 N93-26133 \* #  
A-92141 ..... p 6 N93-12014 \* #  
A-92142 ..... p 33 N93-12018 \* #  
A-92193 ..... p 149 N93-20065 \* #  
A-93026 ..... p 222 N93-24738 \* #

AARL-92-27 ..... p 52 N93-14103 #  
AARL-92-30 ..... p 58 N93-14600 #

AAS PAPER 91-035 ..... p 62 A93-15583 \*  
AAS PAPER 91-046 ..... p 62 A93-15588 \*  
AAS PAPER 91-313 ..... p 400 A93-54306 \*  
AAS PAPER 91-320 ..... p 409 A93-54308 \*  
AAS PAPER 91-321 ..... p 401 A93-54309 \*  
AAS PAPER 91-623 ..... p 402 A93-55802 \*  
AAS PAPER 91-626 ..... p 402 A93-55805 \*  
AAS PAPER 91-669 ..... p 410 A93-55838 \*  
AAS PAPER 92-052 ..... p 392 A93-50592 \*  
AAS PAPER 92-053 ..... p 392 A93-50593 \*  
AAS PAPER 92-054 ..... p 392 A93-50594 \*  
AAS PAPER 92-056 ..... p 392 A93-50596 \*  
AAS PAPER 92-107 ..... p 277 A93-39261 \*

AD-A247382 ..... p 26 N93-11415 #  
AD-A248349 ..... p 26 N93-11488 #  
AD-A248675 ..... p 31 N93-11743 #  
AD-A249123 ..... p 24 N93-10321 #  
AD-A249830 ..... p 31 N93-10994 #  
AD-A249862 ..... p 27 N93-12252 #  
AD-A250198 ..... p 24 N93-10278 #  
AD-A250648 ..... p 23 N93-11893 #  
AD-A250673 ..... p 31 N93-11559 #  
AD-A250705 ..... p 22 N93-11841 #  
AD-A250716 ..... p 35 N93-12491 #  
AD-A252141 ..... p 14 N93-11283 #  
AD-A252329 ..... p 22 N93-11561 #  
AD-A252376 ..... p 14 N93-10796 #  
AD-A252427 ..... p 13 N93-10709 #  
AD-A252820 ..... p 26 N93-11779 #  
AD-A253135 ..... p 13 N93-10613 #  
AD-A253185 ..... p 14 N93-11146 #  
AD-A253235 ..... p 26 N93-11503 #  
AD-A253295 ..... p 14 N93-11193 #  
AD-A253345 ..... p 12 N93-10271 #  
AD-A253392 ..... p 33 N93-12079 #  
AD-A253393 ..... p 30 N93-10217 #  
AD-A253394 ..... p 30 N93-10288 #  
AD-A253564 ..... p 32 N93-11812 #  
AD-A253612 ..... p 13 N93-10650 #  
AD-A253614 ..... p 50 N93-13252 #  
AD-A253648 ..... p 31 N93-11279 #  
AD-A253724 ..... p 25 N93-11081 #

AD-A253808 ..... p 32 N93-11783 #  
AD-A253814 ..... p 32 N93-11784 #  
AD-A253931 ..... p 30 N93-10713 #  
AD-A253988 ..... p 25 N93-10719 #  
AD-A254093 ..... p 25 N93-10658 #  
AD-A254129 ..... p 13 N93-10661 #  
AD-A254138 ..... p 25 N93-10662 #  
AD-A254198 ..... p 30 N93-10261 #  
AD-A254280 ..... p 14 N93-10765 #  
AD-A254327 ..... p 64 N93-12960 #  
AD-A254328 ..... p 23 N93-12145 #  
AD-A254336 ..... p 59 N93-15216 #  
AD-A254359 ..... p 50 N93-12945 #  
AD-A254381 ..... p 64 N93-12860 #  
AD-A254448 ..... p 50 N93-12905 #  
AD-A254455 ..... p 63 N93-12609 #  
AD-A254493 ..... p 63 N93-12576 #  
AD-A254550 ..... p 49 N93-12612 #  
AD-A254581 ..... p 49 N93-12649 #  
AD-A254645 ..... p 57 N93-12662 #  
AD-A254681 ..... p 27 N93-12225 #  
AD-A254699 ..... p 34 N93-12229 #  
AD-A254809 ..... p 49 N93-12751 #  
AD-A254826 ..... p 63 N93-12732 #  
AD-A254840 ..... p 27 N93-12432 #  
AD-A254939 ..... p 63 N93-12545 #  
AD-A254983 ..... p 35 N93-12508 #  
AD-A254984 ..... p 35 N93-12509 #  
AD-A255010 ..... p 39 N93-12871 #  
AD-A255054 ..... p 50 N93-13116 #  
AD-A255061 ..... p 23 N93-12469 #  
AD-A255067 ..... p 35 N93-12486 #  
AD-A255091 ..... p 50 N93-12756 #  
AD-A255120 ..... p 34 N93-12291 #  
AD-A255128 ..... p 34 N93-12423 #  
AD-A255213 ..... p 42 N93-13863 #  
AD-A255224 ..... p 51 N93-13941 #  
AD-A255277 ..... p 54 N93-15006 #  
AD-A255282 ..... p 42 N93-14532 #  
AD-A255299 ..... p 53 N93-14535 #  
AD-A255324 ..... p 69 N93-14548 #  
AD-A255384 ..... p 70 N93-14651 #  
AD-A255432 ..... p 58 N93-14510 #  
AD-A255440 ..... p 53 N93-14782 #  
AD-A255483 ..... p 59 N93-14788 #  
AD-A255485 ..... p 54 N93-14789 #  
AD-A255525 ..... p 70 N93-14554 #  
AD-A255544 ..... p 66 N93-13874 #  
AD-A255553 ..... p 53 N93-14556 #  
AD-A255582 ..... p 95 N93-16041 #  
AD-A255607 ..... p 54 N93-15009 #  
AD-A255627 ..... p 69 N93-14161 #  
AD-A255630 ..... p 52 N93-14162 #  
AD-A255649 ..... p 52 N93-14163 #  
AD-A255652 ..... p 52 N93-14210 #  
AD-A255691 ..... p 52 N93-14103 #  
AD-A255696 ..... p 42 N93-14557 #  
AD-A255699 ..... p 99 N93-16111 #  
AD-A255748 ..... p 54 N93-15053 #  
AD-A255780 ..... p 59 N93-15067 #  
AD-A255785 ..... p 51 N93-14027 #  
AD-A255786 ..... p 51 N93-14028 #  
AD-A255788 ..... p 58 N93-14646 #  
AD-A255799 ..... p 42 N93-14648 #  
AD-A255842 ..... p 52 N93-14084 #  
AD-A255918 ..... p 69 N93-14090 #  
AD-A255926 ..... p 52 N93-14109 #  
AD-A255989 ..... p 58 N93-14416 #  
AD-A256046 ..... p 59 N93-14660 #  
AD-A256059 ..... p 58 N93-14580 #  
AD-A256091 ..... p 69 N93-14427 #  
AD-A256192 ..... p 69 N93-14520 #  
AD-A256245 ..... p 58 N93-14600 #  
AD-A256327 ..... p 54 N93-15192 #  
AD-A256340 ..... p 55 N93-15198 #  
AD-A256369 ..... p 60 N93-15329 #  
AD-A256548 ..... p 57 N93-14267 #  
AD-A256552 ..... p 60 N93-15400 #  
AD-A256557 ..... p 58 N93-14602 #  
AD-A256602 ..... p 52 N93-14240 #  
AD-A256894 ..... p 104 N93-16048 #  
AD-A256959 ..... p 95 N93-16187 #  
AD-A256987 ..... p 104 N93-16258 #

AD-A257016 ..... p 99 N93-16189 #  
AD-A257037 ..... p 71 N93-15363 #  
AD-A257059 ..... p 104 N93-15710 #  
AD-A257152 ..... p 104 N93-16033 #  
AD-A257231 ..... p 80 N93-15965 #  
AD-A257234 ..... p 104 N93-15968 #  
AD-A257612 ..... p 123 N93-18362 #  
AD-A257613 ..... p 120 N93-17926 #  
AD-A257704 ..... p 107 N93-17697 #  
AD-A257711 ..... p 100 N93-17684 #  
AD-A257718 ..... p 121 N93-18211 #  
AD-A257796 ..... p 123 N93-18363 #  
AD-A257934 ..... p 121 N93-18006 #  
AD-A258006 ..... p 130 N93-17816 #  
AD-A258012 ..... p 119 N93-17817 #  
AD-A258023 ..... p 120 N93-17918 #  
AD-A258025 ..... p 131 N93-17919 #  
AD-A258114 ..... p 120 N93-17895 #  
AD-A258115 ..... p 120 N93-17896 #  
AD-A258136 ..... p 120 N93-17985 #  
AD-A258144 ..... p 132 N93-18291 #  
AD-A258146 ..... p 122 N93-18292 #  
AD-A258151 ..... p 140 N93-18293 #  
AD-A258152 ..... p 122 N93-18280 #  
AD-A258156 ..... p 132 N93-18294 #  
AD-A258159 ..... p 123 N93-18295 #  
AD-A258165 ..... p 131 N93-17921 #  
AD-A258185 ..... p 120 N93-17900 #  
AD-A258186 ..... p 131 N93-17857 #  
AD-A258193 ..... p 132 N93-18298 #  
AD-A258198 ..... p 121 N93-18217 #  
AD-A258199 ..... p 131 N93-18205 #  
AD-A258200 ..... p 140 N93-18200 #  
AD-A258219 ..... p 123 N93-18301 #  
AD-A258236 ..... p 130 N93-17820 #  
AD-A258252 ..... p 119 N93-17822 #  
AD-A258261 ..... p 131 N93-18027 #  
AD-A258275 ..... p 139 N93-18029 #  
AD-A258334 ..... p 122 N93-18252 #  
AD-A258364 ..... p 121 N93-18159 #  
AD-A258368 ..... p 121 N93-18209 #  
AD-A258405 ..... p 121 N93-18210 #  
AD-A258473 ..... p 122 N93-18223 #  
AD-A258500 ..... p 132 N93-18273 #  
AD-A258502 ..... p 122 N93-18264 #  
AD-A258502 ..... p 129 N93-20400 #  
AD-A258529 ..... p 148 N93-20050 #  
AD-A258531 ..... p 195 N93-21753 #  
AD-A258552 ..... p 148 N93-19955 #  
AD-A258553 ..... p 135 N93-19956 #  
AD-A258567 ..... p 95 N93-15824 #  
AD-A258724 ..... p 135 N93-20326 #  
AD-A258744 ..... p 128 N93-20384 #  
AD-A258785 ..... p 133 N93-18949 #  
AD-A258854 ..... p 125 N93-19369 #  
AD-A258933 ..... p 133 N93-19449 #  
AD-A259024 ..... p 124 N93-18952 #  
AD-A259068 ..... p 124 N93-19072 #  
AD-A259090 ..... p 172 N93-20587 #  
AD-A259195 ..... p 171 N93-20563 #  
AD-A259243 ..... p 171 N93-20580 #  
AD-A259410 ..... p 194 N93-21269 #  
AD-A259531 ..... p 234 N93-23451 #  
AD-A259597 ..... p 235 N93-24067 #  
AD-A259608 ..... p 225 N93-24227 #  
AD-A259625 ..... p 218 N93-24021 #  
AD-A259684 ..... p 234 N93-23660 #  
AD-A259720 ..... p 235 N93-24128 #  
AD-A259742 ..... p 224 N93-23479 #  
AD-A259803 ..... p 217 N93-23459 #  
AD-A259887 ..... p 218 N93-23984 #  
AD-A259892 ..... p 224 N93-23986 #  
AD-A259905 ..... p 235 N93-23992 #  
AD-A259909 ..... p 235 N93-23995 #  
AD-A259924 ..... p 236 N93-24441 #  
AD-A259954 ..... p 219 N93-24247 #  
AD-A259955 ..... p 225 N93-24297 #  
AD-A259970 ..... p 226 N93-24431 #  
AD-A260052 ..... p 224 N93-23960 #  
AD-A260204 ..... p 235 N93-24001 #  
AD-A260227 ..... p 225 N93-24319 #  
AD-A260280 ..... p 236 N93-24168 #  
AD-A260322 ..... p 219 N93-24238 #

REPORT

## AD-A260514

## REPORT NUMBER INDEX

AD-A260514	p 221	N93-24420	#	AD-A264692	p 336	N93-30494	#	AFOSR-93-0308TR	p 335	N93-30192	#
AD-A260562	p 255	N93-25944	#	AD-A264699	p 259	N93-26138	#	AFOSR-93-0314TR	p 341	N93-30033	#
AD-A260574	p 254	N93-25900	#	AD-A264723	p 336	N93-30515	#	AFOSR-93-0335TR	p 361	N93-32018	#
AD-A260581	p 266	N93-25904	#	AD-A264726	p 342	N93-30575	#	AFOSR-93-0336TR	p 361	N93-32015	#
AD-A260606	p 265	N93-25840	#	AD-A264794	p 330	N93-30665	#	AFOSR-93-0337TR	p 335	N93-30382	#
AD-A260720	p 258	N93-25654	#	AD-A264807	p 330	N93-30594	#	AFOSR-93-0339TR	p 342	N93-30543	#
AD-A260852	p 265	N93-25787	#	AD-A264829	p 336	N93-30613	#	AFOSR-93-0352TR	p 337	N93-30908	#
AD-A260869	p 265	N93-25628	#	AD-A264840	p 337	N93-30904	#				
AD-A260874	p 254	N93-25629	#	AD-A264881	p 337	N93-30908	#				
AD-A260938	p 255	N93-26218	#	AD-A265220	p 366	N93-32006	#	AFRRI-SR92-16	p 49	N93-12649	#
AD-A260977	p 266	N93-25867	#	AD-A265356	p 288	N93-27103	#	AFRRI-SR92-17	p 49	N93-12649	#
AD-A261012	p 266	N93-25859	#	AD-A265362	p 310	N93-27121	#	AFRRI-SR92-27	p 80	N93-15965	#
AD-A261034	p 283	N93-28122	#	AD-A265450	p 364	N93-32064	#	AFRRI-SR92-28	p 80	N93-15965	#
AD-A261040	p 258	N93-25815	#	AD-A265497	p 360	N93-31917	#				
AD-A261048	p 265	N93-25778	#	AD-A265924	p 283	N93-27158	#	AGARD-AG-308-ADD	p 133	N93-18868	#
AD-A261059	p 267	N93-26229	#	AD-A266032	p 288	N93-28622	#	AGARD-AG-334	p 95	N93-15824	#
AD-A261089	p 245	N93-25764	#	AD-A266303	p 274	N93-27152	#				
AD-A261259	p 268	N93-26265	#	AD-A267033	p 317	N93-28850	#	AGARD-CP-518	p 14	N93-11283	#
AD-A261388	p 261	N93-26446	#					AGARD-CP-520	p 317	N93-28850	#
AD-A261394	p 259	N93-26307	#	AD-D015384	p 55	N93-15249	#	AGARD-CP-521	p 144	N93-19757	#
AD-A261405	p 268	N93-26404	#	AD-D015684	p 351	N93-29606	#	AGARD-CP-533	p 367	N93-32240	#
AD-A261418	p 261	N93-26449	#	AD-D015685	p 351	N93-29607	#				
AD-A261438	p 261	N93-26489	#					AI-M-1365	p 224	N93-23986	#
AD-A261445	p 261	N93-26521	#	AD-E501518	p 35	N93-12491	#				
AD-A261449	p 259	N93-26347	#	AD-E501546	p 25	N93-10719	#	AIAA PAPER 92-4066	p 24	A93-11252	#
AD-A261452	p 260	N93-26349	#					AIAA PAPER 92-4067	p 24	A93-11253	#
AD-A261460	p 260	N93-26353	#	AFIT/CI/CIA-92-084	p 131	N93-18027	#	AIAA PAPER 92-4068	p 24	A93-11254	#
AD-A261484	p 260	N93-26356	#	AFIT/CI/CIA-92-89	p 132	N93-18298	#	AIAA PAPER 92-4135	p 136	A93-24490	#
AD-A261592	p 260	N93-26435	#					AIAA PAPER 92-4231	p 28	A93-13357	#
AD-A261593	p 260	N93-26436	#	AFIT/GCA/LSY/92S-1	p 133	N93-18949	#	AIAA PAPER 92-4233	p 28	A93-13331	#
AD-A261658	p 260	N93-26364	#					AIAA PAPER 92-4243	p 28	A93-13350	#
AD-A261692	p 260	N93-26391	#	AFIT/GSM/LSM/92S-8	p 234	N93-23660	#	AIAA PAPER 92-4584	p 28	A93-13288	#
AD-A261808	p 246	N93-26259	#					AIAA PAPER 93-0794	p 136	A93-24873	#
AD-A262180	p 350	N93-29444	#	AFIT/GSO/ENG/92D-03	p 124	N93-18952	#	AIAA PAPER 93-0859	p 137	A93-24923	#
AD-A262262	p 317	N93-28112	#	AFIT/GSO/ENG/92D-04	p 125	N93-19369	#	AIAA PAPER 93-1014	p 223	A93-30928	#
AD-A262399	p 333	N93-29400	#					AIAA PAPER 93-1156	p 230	A93-31031	#
AD-A262417	p 317	N93-28464	#	AFOSR-91-0015TR	p 342	N93-30543	#	AIAA PAPER 93-1157	p 231	A93-31032	#
AD-A262418	p 283	N93-27654	#	AFOSR-92-0202TR	p 26	N93-11488	#	AIAA PAPER 93-1160	p 231	A93-31034	#
AD-A262466	p 317	N93-28757	#	AFOSR-92-0233TR	p 31	N93-10994	#	AIAA PAPER 93-1463	p 261	A93-34012	#
AD-A262467	p 284	N93-28758	#	AFOSR-92-0268TR	p 24	N93-10278	#	AIAA PAPER 93-1464	p 262	A93-34013	#
AD-A262483	p 285	N93-28759	#	AFOSR-92-0375TR	p 22	N93-11841	#	AIAA PAPER 93-3561	p 406	A93-52661	#
AD-A262558	p 333	N93-29421	#	AFOSR-92-0546TR	p 59	N93-14788	#	AIAA PAPER 93-3562	p 406	A93-52662	#
AD-A262616	p 317	N93-28479	#	AFOSR-92-0703TR	p 26	N93-11503	#	AIAA PAPER 93-3564	p 406	A93-52664	#
AD-A262703	p 288	N93-28901	#	AFOSR-92-0714TR	p 13	N93-10650	#	AIAA PAPER 93-3567	p 406	A93-52666	#
AD-A262762	p 285	N93-28939	#	AFOSR-92-0734TR	p 14	N93-11146	#	AIAA PAPER 93-3572	p 400	A93-52692	#
AD-A262861	p 333	N93-29509	#	AFOSR-92-0762TR	p 34	N93-12229	#	AIAA PAPER 93-3578	p 407	A93-52674	#
AD-A262862	p 350	N93-29471	#	AFOSR-92-0766TR	p 14	N93-10765	#	AIAA PAPER 93-3601	p 404	A93-52689	#
AD-A262871	p 340	N93-29481	#	AFOSR-92-0778TR	p 25	N93-10658	#	AIAA PAPER 93-3608	p 406	A93-52669	#
AD-A262872	p 351	N93-29484	#	AFOSR-92-0793TR	p 13	N93-10661	#	AIAA PAPER 93-3863	p 392	A93-51449	#
AD-A262908	p 284	N93-28306	#	AFOSR-92-0809TR	p 25	N93-10662	#	AIAA PAPER 93-3864	p 393	A93-51450	#
AD-A262920	p 288	N93-28307	#	AFOSR-92-0834TR	p 58	N93-14510	#	AIAA PAPER 93-3866	p 393	A93-51452	#
AD-A262926	p 320	N93-28884	#	AFOSR-92-0837TR	p 54	N93-15053	#	AIAA PAPER 93-3875	p 393	A93-51460	#
AD-A262979	p 284	N93-28293	#	AFOSR-92-0850TR	p 23	N93-12469	#				
AD-A263011	p 350	N93-29406	#	AFOSR-92-0852TR	p 69	N93-14427	#	AL-SR-1991-0002	p 25	N93-11081	#
AD-A263033	p 283	N93-27923	#	AFOSR-92-0875TR	p 42	N93-14557	#	AL-SR-1992-0002	p 104	N93-15710	#
AD-A263071	p 314	N93-27927	#	AFOSR-92-0877TR	p 60	N93-15329	#	AL-SR-1992-0005	p 123	N93-18362	#
AD-A263191	p 321	N93-28941	#	AFOSR-92-0883TR	p 59	N93-15067	#				
AD-A263240	p 334	N93-29620	#	AFOSR-92-0901TR	p 55	N93-15198	#	AL-TP-1992-0014	p 27	N93-12252	#
AD-A263458	p 354	N93-30590	#	AFOSR-92-0911TR	p 122	N93-18264	#	AL-TP-1992-0018	p 130	N93-17816	#
AD-A263498	p 322	N93-29340	#	AFOSR-92-0928TR	p 131	N93-17921	#	AL-TP-1992-0033	p 51	N93-14028	#
AD-A263544	p 334	N93-29820	#	AFOSR-92-0946TR	p 135	N93-20326	#	AL-TP-1992-0034	p 51	N93-14027	#
AD-A263559	p 336	N93-30588	#	AFOSR-92-0950TR	p 121	N93-18006	#	AL-TP-1992-0048	p 100	N93-17684	#
AD-A263598	p 330	N93-29915	#	AFOSR-92-0976TR	p 130	N93-17820	#	AL-TP-1992-0053	p 335	N93-30400	#
AD-A263874	p 353	N93-29888	#	AFOSR-92-0997TR	p 224	N93-23479	#	AL-TP-1992-0054	p 258	N93-25815	#
AD-A263875	p 353	N93-29889	#	AFOSR-92-1019TR	p 235	N93-24067	#	AL-TP-1992-0063	p 340	N93-29481	#
AD-A264021	p 340	N93-30026	#	AFOSR-92-8841TR	p 53	N93-14782	#	AL-TP-1993-0010	p 342	N93-30075	#
AD-A264022	p 340	N93-30027	#	AFOSR-93-0024TR	p 225	N93-24297	#	AL-TP-1993-0011	p 340	N93-30026	#
AD-A264056	p 341	N93-30033	#	AFOSR-93-0027TR	p 221	N93-24420	#				
AD-A264069	p 353	N93-29924	#	AFOSR-93-0028TR	p 219	N93-24247	#	AL-TR-1991-0110	p 31	N93-11559	#
AD-A264096	p 338	N93-31094	#	AFOSR-93-0031TR	p 217	N93-23459	#	AL-TR-1992-0011	p 57	N93-12662	#
AD-A264099	p 337	N93-31061	#	AFOSR-93-0043TR	p 261	N93-26446	#	AL-TR-1992-0014	p 317	N93-28464	#
AD-A264117	p 335	N93-30192	#	AFOSR-93-0050TR	p 260	N93-26349	#	AL-TR-1992-0033	p 104	N93-16033	#
AD-A264127	p 335	N93-30196	#	AFOSR-93-0054TR	p 260	N93-26436	#	AL-TR-1992-0049	p 66	N93-13874	#
AD-A264162	p 334	N93-30153	#	AFOSR-93-0055TR	p 260	N93-26435	#	AL-TR-1992-0061	p 353	N93-29889	#
AD-A264179	p 336	N93-30882	#	AFOSR-93-0056TR	p 261	N93-26521	#	AL-TR-1992-0066	p 131	N93-17857	#
AD-A264260	p 337	N93-30894	#	AFOSR-93-0060TR	p 261	N93-26489	#	AL-TR-1992-0068	p 50	N93-12905	#
AD-A264293	p 331	N93-30818	#	AFOSR-93-0070TR	p 259	N93-26347	#	AL-TR-1992-0083	p 288	N93-28307	#
AD-A264306	p 337	N93-30897	#	AFOSR-93-0084TR	p 259	N93-26307	#	AL-TR-1992-0088	p 353	N93-29888	#
AD-A264338	p 335	N93-30160	#	AFOSR-93-0085TR	p 260	N93-26356	#	AL-TR-1992-0101	p 246	N93-26259	#
AD-A264342	p 341	N93-30163	#	AFOSR-93-0086TR	p 260	N93-26391	#	AL-TR-1992-0127	p 340	N93-30027	#
AD-A264367	p 267	N93-26089	#	AFOSR-93-0093TR	p 260	N93-26364	#	AL-TR-1992-0132	p 265	N93-25787	#
AD-A264401	p 353	N93-30167	#	AFOSR-93-0134TR	p 265	N93-25778	#	AL-TR-1992-0134	p 132	N93-18273	#
AD-A264415	p 358	N93-32035	#	AFOSR-93-0136TR	p 261	N93-26449	#	AL-TR-1992-0136	p 148	N93-20050	#
AD-A264438	p 335	N93-30421	#	AFOSR-93-0202TR	p 285	N93-28759	#	AL-TR-1992-0168	p 353	N93-30167	#
AD-A264439	p 336	N93-30422	#	AFOSR-93-0217TR	p 337	N93-30904	#	AL-TR-1992-0171	p 341	N93-30425	#
AD-A264484	p 341	N93-30425	#	AFOSR-93-0237TR	p 341	N93-30163	#	AL-TR-1993-0008	p 317	N93-28479	#
AD-A264492	p 335	N93-30400	#	AFOSR-93-0242TR	p 336	N93-30422	#	AL-TR-1993-0010	p 333	N93-29400	#
AD-A264553	p 335	N93-30382	#	AFOSR-93-0252TR	p 361	N93-31981	#	AL-TR-1993-0023	p 341	N93-30542	#
AD-A264571	p 363	N93-32011	#	AFOSR-93-0256TR	p 335	N93-30160	#	AL-TR-1993-0025	p 353	N93-29924	#
AD-A264575	p 366	N93-32012	#	AFOSR-93-0270TR	p 336	N93-30494	#				
AD-A264626	p 341	N93-30426	#	AFOSR-93-0280TR	p 335	N93-30421	#	AL/HRA-TR-1992-0119	p 139	N93-18029	#
AD-A264661	p 341	N93-30542	#	AFOSR-93-0281TR	p 336	N93-30613	#				
AD-A264674	p 342	N93-30543	#	AFOSR-93-0285TR	p 330	N93-30594	#				
AD-A264675	p 361	N93-32015	#	AFOSR-93-0302TR	p 334	N93-30153	#	ANL/CHM/CP-78537	p 210	N93-24028	#
AD-A264681	p 361	N93-32018	#	AFOSR-93-0304TR	p 338	N93-31094	#	ANL/CP-76567	p 82	N93-17189	#
AD-A264691	p 361	N93-31981	#	AFOSR-93-0306TR	p 337	N93-31061	#	ANL/CP-77257	p 96	N93-16552	#

## REPORT NUMBER INDEX

IITRI-E06641

ARI-RN-92-50	p 26	N93-11779	#	DE92-015353	p 23	N93-11873	#	DOT/FAA/AM-92/23	p 49	N93-12612	#
ARI-RN-92-62-VOL-2	p 63	N93-12545	#	DE92-015760	p 5	N93-10834	#	DOT/FAA/AM-92/25	p 95	N93-16041	#
ARI-RN-92-63	p 35	N93-12509	#	DE92-015847	p 5	N93-10461	#	DOT/FAA/AM-92/29	p 123	N93-18301	#
ARI-RN-92-68	p 70	N93-14651	#	DE92-015919	p 5	N93-10835	#	DOT/FAA/AM-93/3	p 284	N93-28306	#
ARI-RN-93-12	p 235	N93-24001	#	DE92-016034	p 237	N93-25099	#	DOT/FAA/AM-93/4	p 259	N93-26138	#
				DE92-016689	p 6	N93-12315	#	DOT/FAA/AM-93/5	p 267	N93-26089	#
ARI-RR-1622	p 35	N93-12508	#	DE92-017392	p 39	N93-12768	#	DOT/FAA/AM-93/6	p 310	N93-27121	#
ARI-RR-1636	p 354	N93-30590	#	DE92-017448	p 49	N93-12566	#	DOT/FAA/AM-93/7	p 274	N93-27152	#
				DE92-017673	p 40	N93-13269	#	DOT/FAA/AM-93/8	p 283	N93-27158	#
ARI-TR-954	p 63	N93-12609	#	DE92-017863	p 43	N93-15211	#	DOT/FAA/AM-93/9	p 288	N93-28622	#
ARI-TR-974	p 366	N93-32012	#	DE92-018066	p 5	N93-10974	#				
ARI-TR-975	p 363	N93-32011	#	DE92-018760	p 22	N93-11445	#	DOT/FAA/RD-91/14-VOL-1	p 99	N93-16189	#
				DE92-019124	p 63	N93-12712	#	DOT/FAA/RD-92/16-1-VOL-1	p 104	N93-15968	#
ARIEM-TN-93-2	p 218	N93-24021	#	DE92-019411	p 5	N93-11630	#	DOT/FAA/RD-93/9	p 288	N93-27103	#
				DE92-019916	p 40	N93-13083	#				
ARL-TR-25	p 321	N93-28941	#	DE92-019917	p 40	N93-13034	#	DOT/HS-807-866	p 195	N93-21795	#
				DE92-040152	p 41	N93-13520	#				
ARO-RN-92-61	p 30	N93-10261	#	DE92-040153	p 41	N93-13503	#	DOT/VNTSC-FAA-92-9-VOL-1	p 104	N93-15968	#
				DE92-040244	p 51	N93-13522	#				
ARO-24629.68-LS-UIR	p 330	N93-29915	#	DE92-040955	p 95	N93-16166	#	DREO-92-8	p 218	N93-23984	#
ARO-26099.9-LS	p 245	N93-25764	#	DE92-041077	p 96	N93-16441	#				
ARO-26576.3-LS	p 42	N93-13863	#	DE92-041128	p 82	N93-17189	#	E-19298U	p 235	N93-24001	#
ARO-26767.6-LS	p 255	N93-25944	#	DE92-041134	p 96	N93-16552	#	E-7815	p 246	N93-27085	#
ARO-28066.1-MA	p 71	N93-15363	#	DE92-041207	p 82	N93-17359	#				
ARO-29170.2-LS	p 219	N93-24238	#	DE92-642335	p 12	N93-10222	#	EEL-89-236	p 209	N93-23081	#
				DE93-000758	p 372	N93-32406	#				
ASC-TR-92-5017	p 236	N93-24168	#	DE93-001923	p 97	N93-17230	#	EGG-M-92402	p 321	N93-28942	#
				DE93-002098	p 321	N93-28942	#				
ASD-TR-5004-VOL-3	p 30	N93-10713	#	DE93-002281	p 95	N93-15900	#	EPA/600/A-92/166	p 172	N93-21046	#
ASD-TR-92-5010	p 195	N93-21753	#	DE93-002344	p 237	N93-24502	#	EPA/600/A-92/226	p 194	N93-21215	#
				DE93-002940	p 211	N93-25104	#	EPA/600/A-93/017	p 245	N93-25877	#
ASI690-344-91	p 35	N93-12509	#	DE93-003795	p 115	N93-19751	#	EPA/600/8-91/011B	p 12	N93-10438	#
ASI690-348-91	p 63	N93-12609	#	DE93-004515	p 217	N93-22774	#	EPA/832/R-92/004	p 64	N93-12983	#
ASI690-349-91	p 35	N93-12508	#	DE93-005675	p 218	N93-24009	#				
ASI690-354-92-1	p 30	N93-10261	#	DE93-006235	p 127	N93-19838	#	ESA-TT-1269	p 277	N93-29274	#
ASI690-354-92-VOL-2	p 63	N93-12545	#	DE93-006411	p 276	N93-28890	#				
				DE93-006731	p 210	N93-24028	#	ESC-TR-92-121	p 58	N93-14580	#
BD-92-02	p 32	N93-11812	#	DE93-007328	p 264	N93-25415	#	ESC-TR-92-139	p 333	N93-29421	#
				DE93-007428	p 253	N93-25186	#				
BGSM-PP-92-001	p 330	N93-30594	#	DE93-007677	p 264	N93-25318	#	ETN-92 92419	p 26	N93-11212	#
				DE93-007678	p 207	N93-22913	#	ETN-93-92756	p 158	N93-20959	#
BNL-47574	p 5	N93-10461	#	DE93-007815	p 211	N93-24455	#	ETN-93-92808	p 157	N93-20848	#
BNL-47624	p 5	N93-11630	#	DE93-010682	p 246	N93-26587	#	ETN-93-92932	p 82	N93-17214	#
BNL-48062	p 115	N93-19751	#	DE93-010828	p 330	N93-30483	#	ETN-93-92958	p 96	N93-16962	#
				DE93-010854	p 285	N93-28835	#	ETN-93-92990	p 100	N93-17026	#
BR113301	p 25	N93-10979	#	DE93-012109	p 276	N93-28848	#	ETN-93-93434	p 181	N93-21402	#
				DE93-012269	p 276	N93-29181	#	ETN-93-93435	p 196	N93-22389	#
CAP-601	p 363	N93-31729	#	DE93-603677	p 276	N93-28651	#	ETN-93-93480	p 209	N93-23369	#
				DE93-609131	p 331	N93-31161	#	ETN-93-93526	p 225	N93-24104	#
CBIAC-SS-335	p 317	N93-28757	#		p 338	N93-31225	#	ETN-93-93572	p 219	N93-24092	#
CBIAC-SS-373	p 284	N93-28758	#					ETN-93-93573	p 219	N93-24093	#
				DLR-FB-91-14	p 277	N93-29274	#	ETN-93-93693	p 217	N93-23414	#
CMU-CS-93-146	p 364	N93-32064	#	DLR-FB-92-12	p 225	N93-24104	#	ETN-93-93715	p 277	N93-29274	#
				DLR-FB-92-13	p 219	N93-24092	#	ETN-93-93764	p 275	N93-28199	#
CONF-9004365-SUMM	p 82	N93-17359	#	DLR-FB-92-14	p 219	N93-24093	#	ETN-93-93765	p 275	N93-27989	#
CONF-9105279	p 372	N93-32406	#	DLR-FB-92-29	p 343	N93-31229	#	ETN-93-93766	p 275	N93-28200	#
CONF-9110388-1	p 5	N93-10628	#					ETN-93-93767	p 275	N93-28212	#
CONF-9110426	p 338	N93-31225	#	DNA-TR-91-178	p 59	N93-15216	#	ETN-93-93799	p 284	N93-28469	#
CONF-920113-7	p 285	N93-28835	#	DNA-TR-92-54-V2-VOL-2	p 351	N93-29484	#	ETN-93-93877	p 320	N93-28897	#
CONF-9202107-1	p 13	N93-10626	#					ETN-93-93931	p 363	N93-31729	#
CONF-9203160-1	p 5	N93-10461	#	DODA-AR-006-899	p 266	N93-25904	#	ETN-93-93960	p 343	N93-31229	#
CONF-9204144-2	p 5	N93-10834	#					ETN-93-94028	p 359	N93-32423	#
CONF-920508-6	p 276	N93-28890	#	DOE/BP-1792	p 43	N93-15211	#				
CONF-9205118-1	p 5	N93-10974	#					ETS-RR-92-38-0N4	p 52	N93-14109	#
CONF-9206237-1	p 63	N93-12712	#	DOE/ER-13188/7	p 39	N93-12768	#	FASTC-ID(RS)T-0064-92	p 52	N93-14084	#
CONF-9206254-1	p 5	N93-11630	#	DOE/ER-20021/2	p 5	N93-10835	#				
CONF-920630-2	p 96	N93-16552	#	DOE/ER-20033/1	p 276	N93-29181	#	FOA-A-40065-4.5	p 359	N93-32423	#
CONF-9207106-1	p 6	N93-12315	#	DOE/ER-60448/T6	p 276	N93-28651	#				
CONF-9208155-2	p 82	N93-17189	#	DOE/ER-60503/352	p 40	N93-13083	#	FOA-B-40419-4.4	p 275	N93-28199	#
CONF-9208155-3	p 115	N93-19751	#	DOE/ER-60561/6	p 40	N93-13034	#	FOA-B-40420-4.4	p 275	N93-27989	#
CONF-920905-32	p 97	N93-17230	#	DOE/ER-60561/7	p 23	N93-11873	#	FOA-B-40421-4.4	p 275	N93-28200	#
CONF-9210149-1	p 49	N93-12566	#	DOE/ER-60631/10	p 95	N93-15900	#	FOA-B-40422-4.4	p 275	N93-28212	#
CONF-9210177-2	p 237	N93-24502	#	DOE/ER-60707/T3	p 6	N93-12266	#				
CONF-9210231-3	p 217	N93-22774	#	DOE/ER-61228/3	p 218	N93-24009	#	FRA/ORD-92/17	p 351	N93-29675	#
CONF-921197-1	p 51	N93-13522	#		p 96	N93-16441	#				
CONF-930159-16	p 246	N93-26587	#	DOE/MC-27225/T5	p 22	N93-11445	#	HEI/RR-92/52	p 337	N93-30890	#
CONF-930159-3	p 210	N93-24028	#	DOE/MC-27225/3091	p 40	N93-13269	#	HEL-TM-5-92	p 58	N93-14416	#
CONF-930489-1	p 253	N93-25186	#		p 6	N93-12482	#	HEL-TM-7-92	p 104	N93-16048	#
CONF-9305153-2	p 330	N93-30483	#	DOE/RA-50219/T22	p 95	N93-16166	#	HEL-TN-3-92	p 31	N93-11743	#
CONF-930519-1	p 237	N93-25099	#	DOE/RA-50219/T27	p 207	N93-22913	#				
CONF-930561-1	p 264	N93-25415	#	DOE/RA-50219/T28	p 211	N93-24455	#	HS-TR-8025-3C(R2)	p 314	N93-27851	#
CONF-930571-1	p 211	N93-25104	#	DOE/RA-50219/21-PT-1	p 41	N93-13520	#	IAEA-TECDOC-645	p 12	N93-10222	#
CONF-930661-1	p 321	N93-28942	#	DOE/RA-50219/21-PT-2	p 41	N93-13503	#	IC-92/170	p 331	N93-31161	#
CRDEC-TR-400	p 50	N93-12756	#	DOT-HS-807-865	p 194	N93-21537	#	IDA-P-2433	p 35	N93-12491	#
								IDA-P-2609	p 25	N93-10719	#
CTN-93-60696	p 209	N93-23343	#	DOT/FAA/AM-92/12	p 24	N93-10321	#	IDA/HQ-90-36732	p 35	N93-12491	#
				DOT/FAA/AM-92/14	p 253	N93-25214	#	IDA/HQ-91-39384	p 25	N93-10719	#
DCIEM-92-20	p 209	N93-23343	#	DOT/FAA/AM-92/15	p 218	N93-24088	#				
DCIEM-92-31	p 350	N93-29471	#	DOT/FAA/AM-92/16	p 257	N93-25213	#	IITRI-E06641	p 351	N93-29675	#
DCIEM-92-60	p 285	N93-28939	#	DOT/FAA/AM-92/17	p 257	N93-25203	#				
				DOT/FAA/AM-92/22	p 31	N93-11279	#				
DE92-001279	p 6	N93-12482	#								
DE92-013510	p 13	N93-10626	#								
DE92-013673	p 6	N93-12266	#								
DE92-015244	p 5	N93-10628	#								



## INIS-MF-13374

## REPORT NUMBER INDEX

INIS-MF-13374	p 338	N93-31225	#	NAMRL-MONOGRAPH-43	p 27	N93-12432	#	NAS 1.26:192031	p 140	N93-18153	* #
INT-PATENT-CLASS-A61F-2/54	p 70	N93-14870	*	NAMRL-MONOGRAPH-45	p 120	N93-17918	#	NAS 1.26:192042	p 140	N93-18156	* #
INT-PATENT-CLASS-B62D-51/04	p 53	N93-14708	*	NAMRL-SR92-1	p 140	N93-18293	#	NAS 1.26:192045	p 138	N93-17971	* #
INT-PATENT-CLASS-B64G-1/60	p 70	N93-14713	*	NAMRL-SR92-3	p 121	N93-18217	#	NAS 1.26:192062	p 83	N93-17780	* #
INT-PATENT-CLASS-C12N-5/02	p 4	N93-10109	*	NAMRL-TM-92-2	p 120	N93-17895	#	NAS 1.26:192078	p 108	N93-17806	* #
INT-PATENT-CLASS-C12N-5/02	p 5	N93-10110	*	NAMRL-1365	p 140	N93-18200	#	NAS 1.26:192079	p 108	N93-17805	* #
INT-PATENT-CLASS-G01N-33/569	p 245	N93-25994	*	NAMRL-1368	p 120	N93-17896	#	NAS 1.26:192080	p 108	N93-17710	* #
INT-PATENT-CLASS-G06F-15/18	p 340	N93-29610	*	NAMRL-1369	p 132	N93-18294	#	NAS 1.26:192121	p 132	N93-18359	* #
IPEN-PUB-341	p 372	N93-32406	#	NAMRL-1370	p 131	N93-18205	#	NAS 1.26:192157	p 114	N93-18608	* #
ISBN 0-387-54759-2	p 357	A93-46075		NAMRL-1372	p 120	N93-17985	#	NAS 1.26:192188	p 141	N93-19039	* #
ISBN 0-471-57567-4	p 357	A93-46300		NAMRL-1373	p 131	N93-17919	#	NAS 1.26:192219	p 114	N93-19377	* #
ISBN 0-521-34123-X	p 365	A93-47019		NAMRL-1374	p 132	N93-18291	#	NAS 1.26:192295	p 149	N93-20314	* #
ISBN 0-74840-008-7	p 182	A93-26896	*	NAMRL-1375	p 122	N93-18292	#	NAS 1.26:192343	p 234	N93-22663	* #
ISBN 0-8194-0552-3	p 137	A93-25363		NAMRL-1376	p 119	N93-17822	#	NAS 1.26:192361	p 181	N93-20908	* #
ISBN 0-8194-0555-8	p 181	A93-26881		NAMRL-1377	p 171	N93-20580	#	NAS 1.26:192382	p 172	N93-20736	* #
ISBN 0-8194-0822-0	p 391	A93-49451		NAMRL-1379	p 225	N93-24319	#	NAS 1.26:192470	p 195	N93-22002	* #
ISBN 0-8194-0823-9	p 408	A93-53119		NAS 1.15:102849	p 35	N93-12319	* #	NAS 1.26:192481	p 266	N93-25888	* #
ISBN 0-8194-0860-3	p 227	A93-30051		NAS 1.15:103881	p 236	N93-24490	* #	NAS 1.26:192520	p 217	N93-22655	* #
ISBN 0-8194-1030-6	p 190	A93-29101	*	NAS 1.15:103898	p 141	N93-19104	* #	NAS 1.26:192570	p 359	N93-32354	* #
ISBN 0-8236-2415-3	p 87	A93-17897		NAS 1.15:103942	p 255	N93-26133	* #	NAS 1.26:192571	p 359	N93-32365	* #
ISBN 0-8493-4703-3	p 402	A93-55929		NAS 1.15:103949	p 6	N93-12014	* #	NAS 1.26:192575	p 372	N93-32356	* #
ISBN 0-903409-85-2	p 29	A93-13408		NAS 1.15:103950	p 33	N93-12018	* #	NAS 1.26:192616	p 225	N93-24192	* #
ISBN 0-937194-25-5	p 39	A93-17426		NAS 1.15:104737	p 372	N93-32328	* #	NAS 1.26:192703	p 207	N93-22800	* #
ISBN 5-12-001601-4	p 243	A93-35679		NAS 1.15:104753	p 334	N93-29651	* #	NAS 1.26:192766	p 209	N93-23233	* #
ISBN-0-309-04437-5	p 173	N93-21498	#	NAS 1.15:104754	p 31	N93-11649	* #	NAS 1.26:192815	p 209	N93-23169	* #
ISBN-0-8194-0749-6	p 182	A93-27001		NAS 1.15:104758	p 128	N93-20303	* #	NAS 1.26:192830	p 244	N93-25242	* #
ISBN-0-86-039518-9	p 363	N93-31729		NAS 1.15:104767	p 234	N93-23129	* #	NAS 1.26:192874	p 266	N93-26047	* #
ISBN-3-258-04585-2	p 97	A93-17971		NAS 1.15:104769	p 321	N93-29044	* #	NAS 1.26:192882	p 267	N93-26088	* #
ISBN-92-835-0600-6	p 133	N93-18868	#	NAS 1.15:107551	p 4	N93-10085	* #	NAS 1.26:193014	p 313	N93-27847	* #
ISBN-92-835-0664-2	p 14	N93-11283	#	NAS 1.15:107557	p 139	N93-18111	* #	NAS 1.26:193023	p 282	N93-27113	* #
ISBN-92-835-0689-8	p 144	N93-19757	#	NAS 1.15:108005	p 31	N93-10890	* #	NAS 1.26:193040	p 222	N93-24763	* #
ISBN-92-835-0690-1	p 95	N93-15824	#	NAS 1.15:108023	p 194	N93-21370	* #	NAS 1.26:193049	p 282	N93-27102	* #
ISBN-92-835-0703-7	p 367	N93-32240	#	NAS 1.15:108026	p 81	N93-16799	* #	NAS 1.26:193073	p 267	N93-26153	* #
ISBN-92-835-0706-1	p 317	N93-28850	#	NAS 1.15:108034	p 80	N93-15823	* #	NAS 1.26:193137	p 276	N93-28415	* #
ISBN-951-38-3946-X	p 209	N93-23369	#	NAS 1.15:108036	p 123	N93-18375	* #	NAS 1.26:193156	p 322	N93-28895	* #
ISVR-TR-209	p 65	N93-13464		NAS 1.15:108038	p 115	N93-19891	* #	NAS 1.26:193233	p 246	N93-26700	* #
ISVR-TR-218	p 361	N93-32237		NAS 1.15:108039	p 128	N93-19892	* #	NAS 1.26:193245	p 285	N93-29041	* #
IZF-1992-B-1	p 58	N93-14602	#	NAS 1.15:108040	p 125	N93-19648	* #	NAS 1.26:193278	p 277	N93-29216	* #
IZF-1992-B-7	p 60	N93-15400	#	NAS 1.15:108041	p 128	N93-19882	* #	NAS 1.26:193282	p 330	N93-30665	* #
IZF-1992-B-8	p 57	N93-14267	#	NAS 1.15:108042	p 173	N93-21369	* #	NAS 1.26:193304	p 365	N93-31844	* #
JPRS-ULS-92-020	p 244	N93-25406	#	NAS 1.15:108093	p 65	N93-13571	* #	NAS 1.26:193304	p 363	N93-32364	* #
JPRS-ULS-92-022	p 253	N93-25407	#	NAS 1.15:108375	p 6	N93-12174	* #	NAS 1.26:193326	p 244	N93-25195	* #
JPRS-ULS-92-024	p 40	N93-13033	#	NAS 1.15:108409	p 321	N93-28977	* #	NAS 1.26:193466	p 310	N93-27100	* #
JPRS-ULS-92-025	p 244	N93-25405	#	NAS 1.15:108582	p 172	N93-20998	* #	NAS 1.26:193475	p 310	N93-27101	* #
JPRS-ULS-92-027	p 276	N93-28684	#	NAS 1.15:14383	p 50	N93-13023	* #	NAS 1.26:193476	p 123	N93-18376	* #
JPRS-ULS-93-005	p 276	N93-28683	#	NAS 1.15:4408	p 124	N93-18381	* #	NAS 1.26:193476	p 55	N93-15583	* #
L-17090	p 50	N93-13023	* #	NAS 1.19:279	p 65	N93-13692	* #	NAS 1.26:193477	p 269	N93-26157	* #
L-17138	p 124	N93-18381	* #	NAS 1.21:512	p 112	N93-18545	* #	NAS 1.26:193477	p 333	N93-29502	* #
LA-UR-92-1722	p 5	N93-10628	#	NAS 1.21:7011(360)	p 12	N93-10076	* #	NAS 1.60:3266	p 258	N93-25736	* #
LA-UR-92-2039	p 49	N93-12566	#	NAS 1.21:7011(364)	p 12	N93-10077	* #	NAS 1.60:3286	p 96	N93-16619	* #
LA-UR-92-2698	p 51	N93-13522	#	NAS 1.21:7011(365)	p 12	N93-10077	* #	NAS 1.60:3297	p 149	N93-20319	* #
LA-UR-92-3645	p 217	N93-22774	#	NAS 1.21:7011(366)	p 12	N93-10075	* #	NAS 1.60:3298	p 128	N93-20318	* #
LA-UR-93-402	p 253	N93-25186	#	NAS 1.21:7011(367)	p 12	N93-10079	* #	NAS 1.60:3299	p 218	N93-23734	* #
LAIR-471	p 120	N93-17900	#	NAS 1.21:7011(368)	p 12	N93-10080	* #	NAS 1.60:3305	p 217	N93-23410	* #
LBL-PUB-701	p 82	N93-17359	#	NAS 1.21:7011(369)	p 53	N93-14603	* #	NAS 1.61:1304	p 321	N93-29324	* #
LC-91-61252	p 173	N93-21498	#	NAS 1.21:7011(370)	p 53	N93-14731	* #	NAS 1.71:15022-1	p 288	N93-28128	* #
LESC-30277	p 34	N93-12195	* #	NAS 1.21:7011(371)	p 121	N93-18108	* #	NAS 1.71:MFS-26124-1-NPO	p 276	N93-29174	* #
LESC-30302	p 34	N93-12211	* #	NAS 1.21:7011(372)	p 172	N93-20889	* #	NAS 1.71:MFS-28402-1	p 276	N93-28952	* #
LESC-30689	p 234	N93-23129	* #	NAS 1.21:7011(373)	p 172	N93-20889	* #	NAS 1.71:MFS-28610-1	p 106	N93-17045	* #
LS-35001	p 246	N93-26700	* #	NAS 1.21:7011(377)	p 172	N93-21044	* #	NAS 1.71:MFS-28632-1	p 106	N93-17042	* #
MBB-FE-313-S-PUB-0500	p 181	N93-21402	#	NAS 1.26:177602	p 149	N93-20065	* #	NAS 1.71:MFS-28707-1	p 354	N93-30566	* #
MBB-FE-315-S-PUB-0493	p 196	N93-22389	#	NAS 1.26:177609	p 222	N93-24738	* #	NAS 1.71:MFS-28723-1	p 96	N93-17058	* #
MBB-Z-0440-92-PUB	p 158	N93-20959	#	NAS 1.26:184367	p 64	N93-12990	* #	NAS 1.71:MFS-28772-1	p 353	N93-29845	* #
MDC-93W5044	p 195	N93-22002	* #	NAS 1.26:184430	p 64	N93-12966	* #	NAS 1.71:MSC-21842-1	p 106	N93-17088	* #
MRL-GD-0040	p 266	N93-25904	#	NAS 1.26:184402	p 40	N93-12901	* #	NAS 1.71:MSC-21941-1	p 106	N93-17087	* #
MTR-92B0000047V2	p 63	N93-12576	#	NAS 1.26:184429	p 23	N93-12427	* #	NAS 1.71:MSC-21954-1-NP	p 114	N93-19054	* #
MTR-92B0000047V3	p 265	N93-25840	#	NAS 1.26:184438	p 40	N93-12949	* #	NAS 1.71:MSC-21979-1	p 82	N93-17049	* #
MTR-93B0000015	p 322	N93-29340	#	NAS 1.26:185679	p 34	N93-12195	* #	NAS 1.71:MSC-22060-1	p 114	N93-19037	* #
NADC-91129-60	p 148	N93-19955	#	NAS 1.26:185689	p 34	N93-12211	* #	NASA-CASE-ARC-11882-1-CU	p 70	N93-14713	*
NADC-92088-60	p 234	N93-23451	#	NAS 1.26:185701-VOL-1	p 274	N93-27122	* #	NASA-CASE-GSC-13348-2	p 53	N93-14708	*
NAML-TR-92-1	p 122	N93-18280	#	NAS 1.26:185701-VOL-2	p 275	N93-27360	* #	NASA-CASE-LAR-15022-1	p 288	N93-28128	* #
				NAS 1.26:190879	p 42	N93-13612	* #	NASA-CASE-MFS-26124-1-NPO	p 276	N93-29174	* #
				NAS 1.26:190884	p 65	N93-13450	* #	NASA-CASE-MFS-28402-1	p 276	N93-28952	* #
				NAS 1.26:190930	p 41	N93-13327	* #	NASA-CASE-MFS-28481-1	p 70	N93-14870	*
				NAS 1.26:190957	p 50	N93-13061	* #	NASA-CASE-MFS-28610-1	p 106	N93-17045	* #
				NAS 1.26:190959	p 105	N93-16699	* #	NASA-CASE-MFS-28632-1	p 106	N93-17042	* #
				NAS 1.26:190989	p 207	N93-23068	* #	NASA-CASE-MFS-28707-1	p 354	N93-30566	* #
				NAS 1.26:190990	p 208	N93-23079	* #	NASA-CASE-MFS-28723-1	p 96	N93-17058	* #
				NAS 1.26:191123	p 246	N93-27085	* #	NASA-CASE-MFS-28772-1	p 353	N93-29845	* #
				NAS 1.26:191257	p 41	N93-13457	* #	NASA-CASE-MSC-21293-2	p 4	N93-10109	*
				NAS 1.26:191286	p 65	N93-13717	* #	NASA-CASE-MSC-21294-2	p 5	N93-10110	*
				NAS 1.26:191303	p 51	N93-13449	* #	NASA-CASE-MSC-21625-1	p 340	N93-29610	*
				NAS 1.26:191389	p 105	N93-16840	* #	NASA-CASE-MSC-21763-1-SB	p 112	N93-18351	*
				NAS 1.26:191618	p 110	N93-15825	* #	NASA-CASE-MSC-21842-1	p 106	N93-17088	* #
				NAS 1.26:191807	p 110	N93-16709	* #	NASA-CASE-MSC-21941-1	p 106	N93-17087	* #
				NAS 1.26:191912	p 124	N93-18596	* #	NASA-CASE-MSC-21954-1-NP	p 114	N93-19054	* #
				NAS 1.26:192001	p 141	N93-18517	* #	NASA-CASE-MSC-21979-1	p 82	N93-17049	* #
				NAS 1.26:192014	p 140	N93-18113	* #	NASA-CASE-MSC-22060-1	p 114	N93-19037	* #
				NAS 1.26:192015	p 139	N93-17973	* #	NASA-CASE-NPO-17653-1-CU	p 245	N93-25994	*
				NAS 1.26:192016	p 139	N93-18019	* #				
				NAS 1.26:192021	p 138	N93-17970	* #				
				NAS 1.26:192030	p 139	N93-18018	* #				

## SAE PAPER 921188

NASA-CP-10048	p 333	N93-29502 *	NASA-SP-7011(370)	p 121	N93-18108 *	PB92-222868	p 64	N93-12983 #
NASA-CR-177602	p 149	N93-20065 *	NASA-SP-7011(371)	p 172	N93-20889 *	PB92-223239	p 173	N93-21498 #
NASA-CR-177609	p 222	N93-24738 *	NASA-SP-7011(372)	p 172	N93-21044 *	PB93-107514	p 159	N93-21230 #
NASA-CR-184367	p 64	N93-12990 *	NASA-SP-7011(373)	p 256	N93-26945 *	PB93-113769	p 194	N93-21537 #
NASA-CR-184390	p 64	N93-12966 *	NASA-SP-7011(377)	p 361	N93-31924 *	PB93-113777	p 195	N93-21795 #
NASA-CR-184402	p 40	N93-12901 *				PB93-118537	p 104	N93-15968 #
NASA-CR-184429	p 23	N93-12427 *	NASA-TM-102849	p 35	N93-12319 *	PB93-119865	p 194	N93-21215 #
NASA-CR-184438	p 40	N93-12949 *	NASA-TM-103881	p 236	N93-24490 *	PB93-132678	p 221	N93-24590 #
NASA-CR-185679	p 34	N93-12195 *	NASA-TM-103898	p 141	N93-19104 *	PB93-139970	p 244	N93-25457 #
NASA-CR-185689	p 34	N93-12211 *	NASA-TM-103942	p 255	N93-26133 *	PB93-146975	p 234	N93-23647 #
NASA-CR-185701-VOL-1	p 274	N93-27122 *	NASA-TM-103949	p 6	N93-12014 *	PB93-156032	p 245	N93-25877 #
NASA-CR-185701-VOL-2	p 275	N93-27360 *	NASA-TM-103950	p 33	N93-12018 *	PB93-167526	p 286	N93-29199 #
NASA-CR-190879	p 42	N93-13612 *	NASA-TM-104737	p 372	N93-32328 *	PB93-174720	p 336	N93-30659 #
NASA-CR-190884	p 65	N93-13450 *	NASA-TM-104753	p 334	N93-29651 *	PB93-175008	p 351	N93-29675 #
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NASA-CR-190959	p 105	N93-16699 *	NASA-TM-104767	p 234	N93-23129 *	PB93-188332	p 338	N93-31138 #
NASA-CR-190989	p 207	N93-23068 *	NASA-TM-104769	p 321	N93-29044 *	PB93-188662	p 338	N93-31140 #
NASA-CR-190990	p 208	N93-23079 *	NASA-TM-107551	p 4	N93-10085 *	PB93-188670	p 338	N93-31158 #
NASA-CR-191123	p 246	N93-27085 *	NASA-TM-107557	p 139	N93-18111 *			
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NASA-CR-191303	p 51	N93-13449 *	NASA-TM-108026	p 81	N93-16799 *			
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NASA-CR-191618	p 110	N93-15825 *	NASA-TM-108036	p 123	N93-18375 *			
NASA-CR-191807	p 110	N93-16709 *	NASA-TM-108038	p 115	N93-19891 *	PREPRINT-829	p 82	N93-17214 #
NASA-CR-191912	p 124	N93-18596 *	NASA-TM-108039	p 128	N93-19892 *	PREPRINT-856	p 96	N93-16692 #
NASA-CR-192001	p 141	N93-18517 *	NASA-TM-108040	p 125	N93-19648 *	PREPRINT-890	p 100	N93-17026 #
NASA-CR-192014	p 140	N93-18113 *	NASA-TM-108041	p 128	N93-19882 *			
NASA-CR-192015	p 139	N93-17973 *	NASA-TM-108042	p 173	N93-21369 *	RDC-11/92	p 107	N93-17697 #
NASA-CR-192016	p 139	N93-18019 *	NASA-TM-108093	p 65	N93-13571 *			
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NASA-CR-192030	p 139	N93-18018 *	NASA-TM-108409	p 321	N93-28977 *	REPT-3405-F-92	p 52	N93-14210 #
NASA-CR-192031	p 140	N93-18153 *	NASA-TM-108582	p 172	N93-20998 *	REPT-56913-10	p 317	N93-28464 #
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NASA-CR-192219	p 114	N93-19377 *	NATICK-TR-92/130	p 34	N93-12423 #			
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NASA-CR-192470	p 195	N93-22002 *	NATICK/TR-93/009	p 194	N93-21269 #	S-688	p 31	N93-11649 *
NASA-CR-192481	p 266	N93-25888 *	NATICK/TR-93/013	p 265	N93-25628 #	S-690	p 96	N93-16619 *
NASA-CR-192520	p 217	N93-22655 *	NATICK/TR-93/026	p 335	N93-30196 #	S-694	p 149	N93-20319 #
NASA-CR-192570	p 359	N93-32354 *				S-696	p 128	N93-20318 *
NASA-CR-192571	p 359	N93-32365 *	NAWCADPAX-TM-92-37-SY	p 63	N93-12732 #	S-699	p 218	N93-23734 *
NASA-CR-192575	p 372	N93-32356 *	NAWCADPAX-TM-992-90-SY	p 366	N93-32006 #	S-700	p 217	N93-23410 *
NASA-CR-192616	p 225	N93-24192 *				S-707	p 128	N93-20303 *
NASA-CR-192703	p 207	N93-22800 *	NAWCADWAR-92026-60	p 54	N93-14789 #	S-717	p 234	N93-23129 *
NASA-CR-192766	p 209	N93-23233 *	NAWCADWAR-92032-60	p 35	N93-12486 #	S-718	p 321	N93-29324 *
NASA-CR-192815	p 209	N93-23169 *	NAWCADWAR-92037-60	p 64	N93-12860 #	S-720	p 321	N93-29044 *
NASA-CR-192830	p 244	N93-25242 *	NAWCADWAR-92056-60	p 34	N93-12291 #	S-721	p 258	N93-25736 *
NASA-CR-192974	p 266	N93-26047 *	NAWCADWAR-92086-60	p 314	N93-27927 #			
NASA-CR-192982	p 267	N93-26088 *	NAWCADWAR-92088-60	p 234	N93-23451 #	SAE ARD 50027	p 410	A93-54874
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NASA-CR-193245	p 277	N93-29216 *	NMRI-93-14	p 336	N93-30882 #	SAE PAPER 921123	p 291	A93-41315
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NASA-CR-193304	p 363	N93-32364 *	NRAD-TD-2454	p 336	N93-30515 #	SAE PAPER 921131	p 291	A93-41319
NASA-CR-3922(39)	p 244	N93-25195 *	NRAD-TD-2456	p 337	N93-30897 #	SAE PAPER 921132	p 291	A93-41320
NASA-CR-4466	p 310	N93-27100 *				SAE PAPER 921133	p 291	A93-41321
NASA-CR-4467	p 310	N93-27101 *	NRL/FR/5534-92-9375	p 32	N93-11784 #	SAE PAPER 921134	p 287	A93-41322
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NASA-GP-23-1	p 172	N93-20998 *	NUWC-NL-TR-10193	p 133	N93-19449 #	SAE PAPER 921149	p 292	A93-41333
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NASA-SP-512	p 112	N93-18545 *	ORAU-92/F8	p 127	N93-19838 #	SAE PAPER 921156	p 293	A93-41339 *
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NASA-SP-7011(368)	p 53	N93-14603 *	PB92-217033	p 172	N93-21046 #	SAE PAPER 921163	p 294	A93-41345
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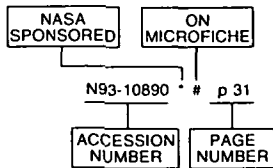
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SAE PAPER 921193	p 295	A93-41371	SAE PAPER 921396	p 309	A93-41553	US-PATENT-CLASS-244-162	p 70	N93-14713 *
SAE PAPER 921197	p 295	A93-41373	SAE PAPER 921397	p 309	A93-41554	US-PATENT-CLASS-272-145	p 70	N93-14713 *
SAE PAPER 921198	p 295	A93-41374	SAE PAPER 921400	p 309	A93-41555	US-PATENT-CLASS-280-1.5	p 53	N93-14708 *
SAE PAPER 921199	p 295	A93-41375	SAE PAPER 921410	p 310	A93-41564	US-PATENT-CLASS-280-290	p 53	N93-14708 *
SAE PAPER 921200	p 295	A93-41376	SAE PAPER 921414	p 310	A93-41565	US-PATENT-CLASS-280-87.051	p 53	N93-14708 *
SAE PAPER 921201	p 295	A93-41377				US-PATENT-CLASS-297-423	p 70	N93-14713 *
SAE PAPER 921210	p 295	A93-41386 *	SAND-91-2603C	p 97	N93-17230 #	US-PATENT-CLASS-395-23	p 340	N93-29610 *
SAE PAPER 921211	p 296	A93-41387 *	SAND-92-1903C	p 237	N93-24502 #	US-PATENT-CLASS-435-240.241	p 5	N93-10110 *
SAE PAPER 921212	p 273	A93-41388	SAND-92-2392	p 264	N93-25318 #	US-PATENT-CLASS-435-240.24	p 4	N93-10109 *
SAE PAPER 921213	p 296	A93-41389 *	SAND-93-0361C	p 330	N93-30483 #	US-PATENT-CLASS-435-240.24	p 5	N93-10110 *
SAE PAPER 921214	p 273	A93-41390 *				US-PATENT-CLASS-435-240.25	p 4	N93-10109 *
SAE PAPER 921215	p 274	A93-41391	SDAG-TN-86-01	p 266	N93-26047 *	US-PATENT-CLASS-435-240.25	p 5	N93-10110 *
SAE PAPER 921216	p 296	A93-41392				US-PATENT-CLASS-435-240.46	p 4	N93-10109 *
SAE PAPER 921227	p 296	A93-41401	SGEB-22	p 43	N93-15208 #	US-PATENT-CLASS-435-240.46	p 5	N93-10110 *
SAE PAPER 921228	p 296	A93-41402				US-PATENT-CLASS-435-7.32	p 245	N93-25994 *
SAE PAPER 921230	p 296	A93-41404	SPIE-1453	p 137	A93-25363	US-PATENT-CLASS-435-7.92	p 245	N93-25994 *
SAE PAPER 921231	p 297	A93-41405 *	SPIE-1456	p 181	A93-26881	US-PATENT-CLASS-435-818	p 5	N93-10110 *
SAE PAPER 921232	p 297	A93-41406 *	SPIE-1612	p 182	A93-27001	US-PATENT-CLASS-435-874	p 245	N93-25994 *
SAE PAPER 921233	p 297	A93-41407	SPIE-1668	p 391	A93-49451	US-PATENT-CLASS-436-518	p 245	N93-25994 *
SAE PAPER 921234	p 297	A93-41408	SPIE-1669	p 408	A93-53119	US-PATENT-CLASS-482-68	p 53	N93-14708 *
SAE PAPER 921238	p 297	A93-41411	SPIE-1695	p 227	A93-30051	US-PATENT-CLASS-482-69	p 53	N93-14708 *
SAE PAPER 921239	p 297	A93-41412	SPIE-1829	p 190	A93-29101 *	US-PATENT-CLASS-623-57	p 70	N93-14870 *
SAE PAPER 921241	p 298	A93-41413 *				US-PATENT-CLASS-623-65	p 70	N93-14870 *
SAE PAPER 921247	p 298	A93-41418	SRS/STG-PR93-5738/17	p 266	N93-25888 *			
SAE PAPER 921248	p 298	A93-41419 *				US-PATENT-4,865,270	p 70	N93-14713 *
SAE PAPER 921249	p 298	A93-41420	SRS/STG-TR92-01-VOL-3-APP-C	p 64	N93-12990 *	US-PATENT-5,153,133	p 5	N93-10110 *
SAE PAPER 921253	p 298	A93-41423 *				US-PATENT-5,155,035	p 4	N93-10109 *
SAE PAPER 921254	p 298	A93-41424 *	STI-TR-8925-001	p 314	N93-27927 #	US-PATENT-5,163,966	p 70	N93-14870 *
SAE PAPER 921255	p 299	A93-41425 *				US-PATENT-5,174,590	p 53	N93-14708 *
SAE PAPER 921256	p 299	A93-41426	STS-40	p 80	N93-15823 *	US-PATENT-5,176,342	p 351	N93-29607
SAE PAPER 921257	p 299	A93-41427				US-PATENT-5,176,836	p 112	N93-18351 *
SAE PAPER 921258	p 299	A93-41428 *	TDCK-92-0240	p 58	N93-14602 #	US-PATENT-5,177,816	p 351	N93-29606
SAE PAPER 921261	p 299	A93-41431	TDCK-92-2282	p 60	N93-15400 #	US-PATENT-5,210,019	p 245	N93-25994 *
SAE PAPER 921264	p 299	A93-41434	TDCK-92-2288	p 57	N93-14267 #	US-PATENT-5,228,113	p 340	N93-29610 *
SAE PAPER 921265	p 299	A93-41435						
SAE PAPER 921266	p 300	A93-41436 *	TN-93-4	p 336	N93-30588 #			
SAE PAPER 921267	p 300	A93-41437				USAARL-92-25	p 69	N93-14090 #
SAE PAPER 921268	p 300	A93-41438 *	TR-1619-1-1	p 234	N93-22663 *	USAARL-92-32	p 129	N93-20400 #
SAE PAPER 921269	p 300	A93-41439 *	TR-1619-1-2	p 267	N93-26088 *	USAARL-92-33	p 119	N93-17817 #
SAE PAPER 921270	p 300	A93-41440	TR-16	p 219	N93-24238 #	USAARL-92-35	p 255	N93-26218 #
SAE PAPER 921271	p 300	A93-41441 *	TR-2	p 60	N93-15329 #	USAARL-92-36	p 235	N93-23995 #
SAE PAPER 921272	p 301	A93-41442	TR-405	p 59	N93-14660 #	USAARL-93-10	p 350	N93-29406 #
SAE PAPER 921274	p 301	A93-41443 *	TR-62	p 224	N93-23960 #	USAARL-93-3	p 226	N93-24431 #
SAE PAPER 921275	p 301	A93-41444 *	TR-89-2	p 42	N93-13612 *	USAARL-93-4	p 236	N93-24441 #
SAE PAPER 921276	p 301	A93-41445 *	TR-92-1-ONR	p 26	N93-11415 #	USAARL-93-5	p 283	N93-27923 #
SAE PAPER 921277	p 301	A93-41446	TR-970	p 333	N93-29421 #	USAARL-93-8	p 235	N93-23992 #
SAE PAPER 921281	p 302	A93-41449				USAARL-93-9	p 268	N93-26265 #
SAE PAPER 921282	p 302	A93-41450	TTC-1121	p 97	N93-17230 #	USAATCOM-TR-92-A-001	p 222	N93-24738 *
SAE PAPER 921285	p 302	A93-41451						
SAE PAPER 921286	p 302	A93-41452 *	UAH-835-REV-1.1	p 64	N93-12966 *	USAEHA-TG-189	p 51	N93-13941 #
SAE PAPER 921287	p 302	A93-41453 *				USARIEM-TN-92-2	p 23	N93-12145 #
SAE PAPER 921288	p 302	A93-41453 *	UCRL-JC-109874	p 5	N93-10974 #			
SAE PAPER 921289	p 303	A93-41464 *				USARIEM-T1-93	p 128	N93-20384 #
SAE PAPER 921303	p 282	A93-41468 *	UMTRI-93-10	p 336	N93-30659 #	USARIEM-T10-92	p 124	N93-19072 #
SAE PAPER 921310	p 303	A93-41472 *				USARIEM-T7-93	p 320	N93-28884 #
SAE PAPER 921311	p 303	A93-41473	URC-80356-VOL-1	p 274	N93-27122 *	USARIEM-T8-92	p 64	N93-12960 #
SAE PAPER 921312	p 303	A93-41474 *	URC-80356-VOL-2	p 275	N93-27360 *			
SAE PAPER 921313	p 303	A93-41475 *				USCG-D-13-92	p 70	N93-14554 #
SAE PAPER 921316	p 303	A93-41478 *	US-PATENT-APPL-SN-024547	p 276	N93-28952 *	USCG-D-16-92	p 107	N93-17697 #
SAE PAPER 921318	p 304	A93-41480	US-PATENT-APPL-SN-029808	p 288	N93-28128 *			
SAE PAPER 921320	p 304	A93-41482	US-PATENT-APPL-SN-035345	p 353	N93-29845 *	USCG-R&DC-03/92	p 70	N93-14554 #
SAE PAPER 921321	p 304	A93-41483 *	US-PATENT-APPL-SN-045142	p 276	N93-29174 *			
SAE PAPER 921322	p 304	A93-41484 *	US-PATENT-APPL-SN-213558	p 5	N93-10110 *	UTHSCSA-OPH-93-01	p 338	N93-31094 #
SAE PAPER 921323	p 304	A93-41485	US-PATENT-APPL-SN-213559	p 4	N93-10109 *			
SAE PAPER 921332	p 304	A93-41493	US-PATENT-APPL-SN-254052	p 70	N93-14713 *	VRI-AFHEL-1-FR-92-1	p 195	N93-21753 #
SAE PAPER 921338	p 305	A93-41497	US-PATENT-APPL-SN-501908	p 245	N93-25994 *			
SAE PAPER 921344	p 305	A93-41503 *	US-PATENT-APPL-SN-545233	p 4	N93-10109 *	VRTC-89-0140-VOL-1	p 194	N93-21537 #
SAE PAPER 921345	p 305	A93-41504 *	US-PATENT-APPL-SN-671603	p 112	N93-18351 *	VRTC-89-0140-VOL-2	p 195	N93-21795 #
SAE PAPER 921346	p 305	A93-41505	US-PATENT-APPL-SN-687605	p 5	N93-10110 *			
SAE PAPER 921347	p 305	A93-41506 *	US-PATENT-APPL-SN-716182	p 340	N93-29610 *	VTT-PUBS-77	p 209	N93-23369 #
SAE PAPER 921348	p 305	A93-41507 *	US-PATENT-APPL-SN-725111	p 53	N93-14708 *	WHOI-93-07	p 330	N93-30665 *
SAE PAPER 921350	p 306	A93-41509	US-PATENT-APPL-SN-805281	p 351	N93-29606			
SAE PAPER 921351	p 306	A93-41510 *	US-PATENT-APPL-SN-815294	p 351	N93-29607	WL-TR-92-3078	p 69	N93-14520 #
SAE PAPER 921352	p 306	A93-41511 *	US-PATENT-APPL-SN-873931	p 70	N93-14870 *	WL-TR-92-3095	p 135	N93-19956 #
SAE PAPER 921353	p 306	A93-41512	US-PATENT-APPL-SN-902166	p 55	N93-15249 #			
SAE PAPER 921354	p 306	A93-41513	US-PATENT-APPL-SN-912953	p 354	N93-30566 *	WRAIR-92-001	p 52	N93-14162 #
SAE PAPER 921355	p 306	A93-41514	US-PATENT-APPL-SN-931942	p 82	N93-17049 *			
SAE PAPER 921356	p 307	A93-41515 *	US-PATENT-APPL-SN-937325	p 106	N93-17087 *	WSU-FR-661805	p 235	N93-24067 #
SAE PAPER 921357	p 307	A93-41516 *	US-PATENT-APPL-SN-963349	p 114	N93-19054 *			
SAE PAPER 921358	p 307	A93-41517 *	US-PATENT-APPL-SN-970203	p 106	N93-17045 *			
SAE PAPER 921359	p 307	A93-41518	US-PATENT-APPL-SN-970204	p 106	N93-17042 *			
SAE PAPER 921360	p 307	A93-41519	US-PATENT-APPL-SN-971116	p 106	N93-17088 *			
SAE PAPER 921361	p 274	A93-41520 *	US-PATENT-APPL-SN-986631	p 96	N93-17058 *			
SAE PAPER 921362	p 307	A93-41521	US-PATENT-APPL-SN-996263	p 114	N93-19037 *			
SAE PAPER 921376	p 308	A93-41534						
SAE PAPER 921381	p 308	A93-41539 *	US-PATENT-CLASS-2-424	p 351	N93-29606			
SAE PAPER 921383	p 308	A93-41541	US-PATENT-CLASS-210-140	p 112	N93-18351 *			
SAE PAPER 921384	p 308	A93-41542 *	US-PATENT-CLASS-210-190	p 112	N93-18351 *			
SAE PAPER 921386	p 308	A93-41544 *	US-PATENT-CLASS-210-670	p 112	N93-18351 *			
SAE PAPER 921387	p 308	A93-41545 *	US-PATENT-CLASS-210-739	p 112	N93-18351 *			
SAE PAPER 921388	p 282	A93-41546 *	US-PATENT-CLASS-210-753	p 112	N93-18351 *			
SAE PAPER 921389	p 308	A93-41547	US-PATENT-CLASS-210-764	p 112	N93-18351 *			
SAE PAPER 921390	p 309	A93-41548	US-PATENT-CLASS-210-96.1	p 112	N93-18351 *			
SAE PAPER 921391	p 309	A93-41549 *	US-PATENT-CLASS-244-118.5	p 70	N93-14713 *			

# ACCESSION NUMBER INDEX

AEROSPACE MEDICINE AND BIOLOGY / A Continuing Bibliography  
1993 Cumulative Index

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## Typical Accession Number Index Listing



Listings in this index are arranged alphanumerically by accession number. The page number indicates the page on which the citation is located. The accession number denotes the number by which the citation is identified. An asterisk (\*) indicates that the item is a NASA report. A pound sign (#) indicates that the item is available on microfiche.

A93-10124	p 7	A93-13534	p 29	A93-14975	p 44	A93-17549	p 86	A93-18569	p 101
A93-10125	p 1	A93-13535	p 29	A93-15057	p 61	A93-17550	p 86	A93-18710	p 101
A93-10326	p 7	A93-13536	p 3	A93-15165	p 44	A93-17551	p 87	A93-18769	p 98
A93-10327	p 7	A93-13537	p 29	A93-15166	p 45	A93-17552	p 87	A93-18773	p 98
A93-10329	p 7	A93-13538	p 3	A93-15167	p 45	A93-17553	p 87	A93-18775	p 98
A93-10330	p 7	A93-13539	p 29	A93-15168	p 45	A93-17673	p 97	A93-19090	p 101
A93-10331	p 8	A93-13540	p 3	A93-15172	p 45	A93-17800	p 97	A93-19104	p 101
A93-10332	p 8	A93-13541	p 24	A93-15173	p 45	A93-17822	p 73	A93-19256	p 102
A93-10333	p 8	A93-13542	p 3	A93-15174	p 45	A93-17823	p 73	A93-19984	p 102
A93-10334	p 23	A93-13543	p 3	A93-15175	p 45	A93-17824	p 108	A93-19985	p 102
A93-10335	p 8	A93-13544	p 3	A93-15419	p 61	A93-17825	p 73	A93-19986	p 102
A93-10336	p 8	A93-13545	p 3	A93-15526	p 37	A93-17897	p 87	A93-19987	p 102
A93-10337	p 9	A93-13704	p 10	A93-15527	p 38	A93-17971	p 97	A93-19988	p 102
A93-10338	p 9	A93-13705	p 10	A93-15528	p 46	A93-17974	p 97	A93-19989	p 103
A93-10636	p 1	A93-13706	p 10	A93-15529	p 56	A93-17975	p 87	A93-19990	p 103
A93-11150	p 1	A93-13707	p 11	A93-15530	p 46	A93-17976	p 109	A93-19991	p 91
A93-11198	p 1	A93-13708	p 11	A93-15575	p 46	A93-17977	p 109	A93-19992	p 91
A93-11199	p 1	A93-13709	p 4	A93-15583	p 62	A93-17979	p 109	A93-19993	p 91
A93-11201	p 27	A93-13710	p 11	A93-15588	p 62	A93-17980	p 109	A93-19994	p 77
A93-11202	p 27	A93-13711	p 11	A93-15661	p 56	A93-17981	p 109	A93-19995	p 91
A93-11204	p 27	A93-13712	p 4	A93-15662	p 56	A93-17982	p 109	A93-19996	p 92
A93-11252	# p 24	A93-13713	p 11	A93-15663	p 56	A93-17983	p 110	A93-19997	p 92
A93-11253	# p 24	A93-13714	p 11	A93-15664	p 56	A93-17984	p 110	A93-19998	p 103
A93-11254	# p 24	A93-13715	p 11	A93-15665	p 62	A93-17987	p 110	A93-19999	p 103
A93-11286	p 9	A93-13716	p 11	A93-16001	p 38	A93-18001	p 73	A93-20015	p 103
A93-11287	p 27	A93-13717	p 4	A93-16074	p 46	A93-18002	p 73	A93-20026	p 92
A93-11675	p 9	A93-13718	p 30	A93-16075	p 46	A93-18003	p 74	A93-20027	p 77
A93-11690	p 9	A93-13719	p 12	A93-16151	p 46	A93-18005	p 74	A93-20028	p 92
A93-11691	p 1	A93-13720	p 4	A93-16152	p 56	A93-18006	p 74	A93-20029	p 92
A93-11847	p 35	A93-13721	p 30	A93-16153	p 46	A93-18007	p 74	A93-20030	p 78
A93-12077	p 27	A93-13722	p 4	A93-16154	p 47	A93-18008	p 74	A93-20031	p 92
A93-12078	p 28	A93-13723	p 30	A93-16155	p 47	A93-18009	p 74	A93-20032	p 78
A93-12222	p 28	A93-13774	p 43	A93-16156	p 47	A93-18010	p 74	A93-20033	p 78
A93-12860	p 2	A93-13817	p 60	A93-16157	p 47	A93-18033	p 87	A93-20034	p 78
A93-12861	p 2	A93-13907	p 60	A93-16158	p 47	A93-18034	p 87	A93-20035	p 93
A93-12862	p 9	A93-13935	p 43	A93-16159	p 56	A93-18036	p 88	A93-20036	p 78
A93-12863	p 2	A93-14097	p 55	A93-16160	p 48	A93-18037	p 88	A93-20037	p 79
A93-12864	p 2	A93-14098	p 55	A93-16161	p 48	A93-18038	p 88	A93-20038	p 79
A93-12969	p 10	A93-14119	p 55	A93-16162	p 57	A93-18039	p 88	A93-20039	p 93
A93-13288	# p 28	A93-14121	p 37	A93-16164	p 48	A93-18040	p 88	A93-20075	p 98
A93-13331	# p 28	A93-14123	p 43	A93-16254	p 48	A93-18041	p 89	A93-20081	p 79
A93-13350	# p 28	A93-14222	p 60	A93-16373	p 57	A93-18042	p 89	A93-20082	p 79
A93-13357	# p 28	A93-14314	p 60	A93-16481	p 38	A93-18043	p 89	A93-20083	p 79
A93-13408	p 29	A93-14319	p 61	A93-16484	p 38	A93-18044	p 89	A93-20084	p 79
A93-13410	p 24	A93-14377	p 61	A93-16749	p 38	A93-18045	p 89	A93-20085	p 79
A93-13411	p 24	A93-14378	p 61	A93-16750	p 39	A93-18046	p 97	A93-20086	p 79
A93-13413	p 29	A93-14413	p 61	A93-17071	p 57	A93-18073	p 75	A93-20087	p 79
A93-13414	p 29	A93-14727	p 61	A93-17072	p 62	A93-18286	p 75	A93-20088	p 79
A93-13416	p 29	A93-14968	p 44	A93-17075	p 62	A93-18287	p 75	A93-20089	p 79
A93-13528	p 2	A93-14969	p 44	A93-17426	p 39	A93-18288	p 75	A93-20090	p 79
A93-13529	p 10	A93-14970	p 37	A93-17428	p 48	A93-18289	p 75	A93-20091	p 79
A93-13530	p 2	A93-14971	p 44	A93-17429	p 39	A93-18290	p 75	A93-20092	p 79
A93-13531	p 10	A93-14972	p 44	A93-17430	p 48	A93-18291	p 89	A93-20093	p 79
A93-13532	p 2	A93-14973	p 37	A93-17431	p 57	A93-18292	p 90	A93-20094	p 79
A93-13533	p 10	A93-14974	p 37	A93-17432	p 62	A93-18293	p 76	A93-20095	p 79
				A93-17433	p 62	A93-18294	p 76	A93-20096	p 79
				A93-17434	p 39	A93-18295	p 76	A93-20097	p 79
				A93-17435	p 71	A93-18296	p 76	A93-20098	p 79
				A93-17439	p 48	A93-18297	p 76	A93-20099	p 79
				A93-17440	p 49	A93-18298	p 76	A93-20100	p 79
				A93-17442	p 49	A93-18299	p 76	A93-20101	p 79
				A93-17443	p 49	A93-18300	p 77	A93-20102	p 79
				A93-17446	p 39	A93-18301	p 77	A93-20103	p 79
				A93-17527	p 83	A93-18302	p 77	A93-20104	p 79
				A93-17528	p 83	A93-18347	p 100	A93-20105	p 79
				A93-17529	p 83	A93-18406	p 90	A93-20106	p 79
				A93-17530	p 84	A93-18407	p 90	A93-20107	p 79
				A93-17531	p 84	A93-18408	p 90	A93-20108	p 79
				A93-17532	p 84	A93-18409	p 100	A93-20109	p 79
				A93-17533	p 84	A93-18410	p 90	A93-20110	p 79
				A93-17534	p 84	A93-18411	p 90	A93-20111	p 79
				A93-17535	p 84	A93-18412	p 98	A93-20112	p 79
				A93-17537	p 85	A93-18413	p 98	A93-20113	p 79
				A93-17538	p 85	A93-18414	p 98	A93-20114	p 79
				A93-17539	p 85	A93-18415	p 91	A93-20115	p 79
				A93-17540	p 85	A93-18416	p 91	A93-20116	p 79
				A93-17541	p 73	A93-18417	p 91	A93-20117	p 79
				A93-17542	p 85	A93-18418	p 101	A93-20118	p 79
				A93-17543	p 85	A93-18419	p 77	A93-20119	p 79
				A93-17544	p 86	A93-18530	p 101	A93-20120	p 79
				A93-17547	p 86	A93-18531	p 101	A93-20121	p 79
				A93-17548	p 86			A93-20122	p 79

## A93-24039

A93-24039 p 116  
 A93-24040 p 129  
 A93-24041 p 116  
 A93-24042 p 117  
 A93-24043 p 117  
 A93-24044 p 117  
 A93-24045 p 117  
 A93-24046 p 136  
 A93-24047 p 112  
 A93-24049 p 117  
 A93-24050 p 136  
 A93-24490 # p 136  
 A93-24873 # p 136  
 A93-24923 # p 137  
 A93-24994 # p 137  
 A93-25123 p 137  
 A93-25201 p 118  
 A93-25202 p 118  
 A93-25203 p 118  
 A93-25204 p 118  
 A93-25205 p 130  
 A93-25206 p 118  
 A93-25207 p 130  
 A93-25208 p 118  
 A93-25209 p 130  
 A93-25210 p 119  
 A93-25308 p 137  
 A93-25309 p 137  
 A93-25363 p 137  
 A93-25482 p 138  
 A93-25487 p 138  
 A93-25600 p 119  
 A93-25651 p 112  
 A93-25652 p 119  
 A93-25653 p 119  
 A93-25821 p 151  
 A93-26245 p 159  
 A93-26500 p 151  
 A93-26548 p 151  
 A93-26549 p 151  
 A93-26567 p 181  
 A93-26569 p 174  
 A93-26570 p 159  
 A93-26571 p 159  
 A93-26572 p 160  
 A93-26832 p 160  
 A93-26881 p 181  
 A93-26885 p 181  
 A93-26887 p 182  
 A93-26896 p 182  
 A93-26950 p 174  
 A93-27000 p 152  
 A93-27001 p 182  
 A93-27002 p 182  
 A93-27003 p 182  
 A93-27022 p 182  
 A93-27024 p 183  
 A93-27025 p 183  
 A93-27027 p 183  
 A93-27028 p 183  
 A93-27029 p 183  
 A93-27030 p 183  
 A93-27031 p 184  
 A93-27032 p 184  
 A93-27033 p 184  
 A93-27034 p 184  
 A93-27035 p 184  
 A93-27037 p 184  
 A93-27038 p 185  
 A93-27048 p 160  
 A93-27049 p 152  
 A93-27050 p 152  
 A93-27126 p 185  
 A93-27127 p 185  
 A93-27128 p 185  
 A93-27129 p 185  
 A93-27130 p 175  
 A93-27131 p 185  
 A93-27135 p 175  
 A93-27137 p 175  
 A93-27138 p 175  
 A93-27139 p 175  
 A93-27140 p 175  
 A93-27141 p 186  
 A93-27142 p 176  
 A93-27143 p 176  
 A93-27144 p 176  
 A93-27145 p 186  
 A93-27147 p 176  
 A93-27148 p 186  
 A93-27151 p 186  
 A93-27152 p 186  
 A93-27153 p 186  
 A93-27154 p 187  
 A93-27155 p 187  
 A93-27156 p 187

A93-27157 p 187  
 A93-27158 p 176  
 A93-27160 p 187  
 A93-27163 p 188  
 A93-27167 p 188  
 A93-27169 p 176  
 A93-27170 p 188  
 A93-27171 p 177  
 A93-27172 p 160  
 A93-27173 p 177  
 A93-27174 p 177  
 A93-27175 p 177  
 A93-27176 p 177  
 A93-27177 p 178  
 A93-27178 p 178  
 A93-27179 p 178  
 A93-27180 p 178  
 A93-27182 p 188  
 A93-27183 p 178  
 A93-27184 p 188  
 A93-27185 p 178  
 A93-27186 p 188  
 A93-27187 p 178  
 A93-27188 p 179  
 A93-27190 p 189  
 A93-27191 p 189  
 A93-27192 p 160  
 A93-27193 p 189  
 A93-27194 p 179  
 A93-27195 p 179  
 A93-27196 p 179  
 A93-27224 p 152  
 A93-27451 p 189  
 A93-27452 p 179  
 A93-27453 p 179  
 A93-27454 p 180  
 A93-27455 p 189  
 A93-27456 p 180  
 A93-27460 p 152  
 A93-27561 p 196  
 A93-27649 p 160  
 A93-27685 p 160  
 A93-27686 p 161  
 A93-27775 p 152  
 A93-27799 p 153  
 A93-27800 p 153  
 A93-27817 p 180  
 A93-27887 p 196  
 A93-27918 p 153  
 A93-28049 p 161  
 A93-28158 p 180  
 A93-28376 p 197  
 A93-28377 p 197  
 A93-28676 p 161  
 A93-28677 p 161  
 A93-28678 p 161  
 A93-28679 p 162  
 A93-28680 p 162  
 A93-28681 p 162  
 A93-28682 p 162  
 A93-28683 p 162  
 A93-28684 p 163  
 A93-28685 p 163  
 A93-28686 p 163  
 A93-28687 p 163  
 A93-28688 p 163  
 A93-28689 p 164  
 A93-28690 p 164  
 A93-28691 p 153  
 A93-28692 p 180  
 A93-28693 p 153  
 A93-28694 p 153  
 A93-28695 p 189  
 A93-28696 p 164  
 A93-28697 p 164  
 A93-28698 p 153  
 A93-28699 p 164  
 A93-28700 p 154  
 A93-28701 p 165  
 A93-28702 p 165  
 A93-28704 p 154  
 A93-28705 p 165  
 A93-28706 p 154  
 A93-28707 p 180  
 A93-28708 p 165  
 A93-28709 p 165  
 A93-28710 p 166  
 A93-28711 p 154  
 A93-28712 p 166  
 A93-28713 p 166  
 A93-28714 p 154  
 A93-28715 p 190  
 A93-28716 p 155  
 A93-28717 p 190  
 A93-28718 p 166  
 A93-28719 p 166

A93-28720 p 166  
 A93-28721 p 167  
 A93-28722 p 155  
 A93-28723 p 167  
 A93-28724 p 180  
 A93-28725 p 155  
 A93-28726 p 155  
 A93-28727 p 155  
 A93-28728 p 155  
 A93-28729 p 167  
 A93-28730 p 156  
 A93-28731 p 181  
 A93-28732 p 167  
 A93-28733 p 156  
 A93-28734 p 167  
 A93-28735 p 168  
 A93-28736 p 168  
 A93-28737 p 168  
 A93-28738 p 156  
 A93-28739 p 168  
 A93-28740 p 168  
 A93-28741 p 168  
 A93-28743 p 156  
 A93-28744 p 169  
 A93-28745 p 156  
 A93-28746 p 156  
 A93-28747 p 169  
 A93-28748 p 157  
 A93-28750 p 169  
 A93-28751 p 169  
 A93-28752 p 157  
 A93-28754 p 169  
 A93-28755 p 169  
 A93-28756 p 170  
 A93-28757 p 170  
 A93-28758 p 170  
 A93-28759 p 170  
 A93-28760 p 170  
 A93-28761 p 170  
 A93-28762 p 171  
 A93-28763 p 157  
 A93-28764 p 157  
 A93-28765 p 171  
 A93-28766 p 171  
 A93-29101 p 190  
 A93-29106 p 190  
 A93-29107 p 190  
 A93-29109 p 190  
 A93-29110 p 191  
 A93-29111 p 191  
 A93-29112 p 191  
 A93-29113 p 191  
 A93-29114 p 191  
 A93-29115 p 192  
 A93-29116 p 192  
 A93-29118 p 192  
 A93-29121 p 192  
 A93-29132 p 192  
 A93-29135 p 193  
 A93-29136 p 193  
 A93-29137 p 193  
 A93-29141 p 193  
 A93-29696 p 193  
 A93-30051 p 227  
 A93-30052 p 227  
 A93-30053 p 227  
 A93-30054 p 227  
 A93-30055 p 227  
 A93-30056 p 227  
 A93-30057 p 227  
 A93-30058 p 227  
 A93-30059 p 228  
 A93-30060 p 228  
 A93-30061 p 228  
 A93-30062 p 228  
 A93-30063 p 228  
 A93-30064 p 228  
 A93-30065 p 228  
 A93-30066 p 229  
 A93-30067 p 229  
 A93-30068 p 229  
 A93-30069 p 229  
 A93-30070 p 229  
 A93-30071 p 229  
 A93-30072 p 230  
 A93-30239 p 222  
 A93-30276 p 211  
 A93-30277 p 222  
 A93-30278 p 211  
 A93-30279 p 211  
 A93-30280 p 212  
 A93-30281 p 212  
 A93-30282 p 212  
 A93-30283 p 212  
 A93-30284 p 212  
 A93-30285 p 213

A93-30286 p 213  
 A93-30287 p 230  
 A93-30435 p 213  
 A93-30436 p 213  
 A93-30437 p 199  
 A93-30438 p 199  
 A93-30439 p 230  
 A93-30440 p 222  
 A93-30441 p 199  
 A93-30442 p 199  
 A93-30443 p 223  
 A93-30444 p 199  
 A93-30445 p 213  
 A93-30454 p 230  
 A93-30455 p 230  
 A93-30456 p 223  
 A93-30511 p 199  
 A93-30771 p 213  
 A93-30772 p 213  
 A93-30773 p 214  
 A93-30928 # p 223  
 A93-31031 # p 230  
 A93-31032 # p 231  
 A93-31034 # p 231  
 A93-31188 p 200  
 A93-31190 p 200  
 A93-31267 p 214  
 A93-31490 p 223  
 A93-31491 p 223  
 A93-31517 p 231  
 A93-31522 p 231  
 A93-31530 p 200  
 A93-31531 p 214  
 A93-31533 p 231  
 A93-31545 p 214  
 A93-31626 p 231  
 A93-31628 p 200  
 A93-31782 p 231  
 A93-31944 p 231  
 A93-31993 p 231  
 A93-32004 p 223  
 A93-32071 p 200  
 A93-32072 p 200  
 A93-32073 p 231  
 A93-32113 p 201  
 A93-32115 p 201  
 A93-32116 p 201  
 A93-32118 p 201  
 A93-32119 p 201  
 A93-32120 p 214  
 A93-32124 p 201  
 A93-32125 p 202  
 A93-32176 p 214  
 A93-32243 p 202  
 A93-32444 p 231  
 A93-32474 p 215  
 A93-32651 p 202  
 A93-32652 p 202  
 A93-32670 p 202  
 A93-32749 p 202  
 A93-32773 p 203  
 A93-32774 p 215  
 A93-32775 p 215  
 A93-32776 p 215  
 A93-32777 p 215  
 A93-32778 p 215  
 A93-32780 p 223  
 A93-32781 p 216  
 A93-32782 p 224  
 A93-32783 p 216  
 A93-32784 p 216  
 A93-32785 p 216  
 A93-32786 p 216  
 A93-32787 p 217  
 A93-32788 p 224  
 A93-32850 p 203  
 A93-33026 p 203  
 A93-33027 p 203  
 A93-33028 p 203  
 A93-33029 p 203  
 A93-33030 p 203  
 A93-33031 p 204  
 A93-33033 p 204  
 A93-33035 p 204  
 A93-33036 p 204  
 A93-33038 p 204  
 A93-33043 p 204  
 A93-33045 p 205  
 A93-33250 p 232  
 A93-33443 p 232  
 A93-33444 p 232  
 A93-33445 p 232  
 A93-33446 p 232  
 A93-33447 p 233  
 A93-33448 p 233  
 A93-33449 p 233

A93-33450 p 233  
 A93-34012 # p 261  
 A93-34013 # p 262  
 A93-34518 p 239  
 A93-34581 p 239  
 A93-34593 p 256  
 A93-34858 p 239  
 A93-34985 p 262  
 A93-34986 p 262  
 A93-35099 p 256  
 A93-35207 p 247  
 A93-35208 p 247  
 A93-35209 p 247  
 A93-35210 p 239  
 A93-35211 p 239  
 A93-35212 p 239  
 A93-35213 p 240  
 A93-35214 p 247  
 A93-35215 p 240  
 A93-35216 p 247  
 A93-35217 p 240  
 A93-35219 p 248  
 A93-35220 p 256  
 A93-35221 p 248  
 A93-35222 p 248  
 A93-35223 p 248  
 A93-35224 p 240  
 A93-35225 p 240  
 A93-35226 p 248  
 A93-35227 p 248  
 A93-35228 p 248  
 A93-35229 p 240  
 A93-35230 p 249  
 A93-35231 p 249  
 A93-35232 p 240  
 A93-35233 p 256  
 A93-35234 p 249  
 A93-35235 p 262  
 A93-35236 p 249  
 A93-35237 p 262  
 A93-35238 p 249  
 A93-35239 p 262  
 A93-35240 p 240  
 A93-35241 p 256  
 A93-35242 p 241  
 A93-35243 p 249  
 A93-35244 p 249  
 A93-35245 p 250  
 A93-35246 p 241  
 A93-35247 p 250  
 A93-35248 p 241  
 A93-35249 p 257  
 A93-35250 p 250  
 A93-35251 p 257  
 A93-35252 p 250  
 A93-35253 p 250  
 A93-35254 p 250  
 A93-35255 p 250  
 A93-35256 p 251  
 A93-35257 p 251  
 A93-35258 p 241  
 A93-35259 p 241  
 A93-35260 p 241  
 A93-35261 p 242  
 A93-35262 p 242  
 A93-35263 p 242  
 A93-35264 p 242  
 A93-35493 p 251  
 A93-35494 p 251  
 A93-35495 p 251  
 A93-35496 p 251  
 A93-35497 p 252  
 A93-35498 p 242  
 A93-35499 p 257  
 A93-35500 p 252  
 A93-35530 p 262  
 A93-35534 p 263  
 A93-35536 p 263  
 A93-35566 p 263  
 A93-35570 p 263  
 A93-35571 p 263  
 A93-35670 p 242  
 A93-35671 p 242  
 A93-35672 p 243  
 A93-35679 p 243  
 A93-35914 p 263  
 A93-35918 p 264  
 A93-36229 p 257  
 A93-36551 p 268  
 A93-36552 p 268  
 A93-36554 p 268  
 A93-36555 p 243  
 A93-36556 p 268  
 A93-36557 p 243  
 A93-36558 p 269  
 A93-36559 p 243

## ACCESSION NUMBER INDEX

## ACCESSION NUMBER INDEX

## A93-53289

A93-36560	p 269	A93-41343	p 294	A93-41544	p 308	A93-44903	p 328	A93-49562	p 382
A93-36561	p 269	A93-41344	p 294	A93-41545	p 308	A93-44922	p 339	A93-49563	p 388
A93-36562	p 244	A93-41345	p 294	A93-41546	p 282	A93-44923	p 339	A93-49564	p 391
A93-36563	p 269	A93-41346	p 294	A93-41547	p 308	A93-44928	p 328	A93-49565	p 382
A93-36564	p 269	A93-41365	p 294	A93-41548	p 309	A93-44929	p 328	A93-49566	p 382
A93-36583	p 257	A93-41367	p 294	A93-41549	p 309	A93-44930	p 328	A93-49567	p 382
A93-36723	p 252	A93-41368	p 294	A93-41551	p 274	A93-44931	p 329	A93-49568	p 383
A93-36724	p 252	A93-41369	p 294	A93-41552	p 309	A93-44933	p 329	A93-49569	p 383
A93-36742	p 252	A93-41371	p 295	A93-41553	p 309	A93-44934	p 329	A93-49570	p 377
A93-36743	p 252	A93-41373	p 295	A93-41554	p 309	A93-44935	p 329	A93-49571	p 383
A93-36744	p 257	A93-41374	p 295	A93-41555	p 309	A93-44939	p 329	A93-49572	p 383
A93-36745	p 253	A93-41375	p 295	A93-41564	p 310	A93-44940	p 339	A93-49573	p 383
A93-37070	p 264	A93-41376	p 295	A93-41565	p 310	A93-44941	p 329	A93-49574	p 383
A93-37300	p 264	A93-41377	p 295	A93-41978	p 344	A93-45320	p 332	A93-49575	p 377
A93-38451	p 271	A93-41386	p 295	A93-41991	p 344	A93-45321	p 333	A93-49576	p 383
A93-39261	p 277	A93-41387	p 296	A93-41995	p 345	A93-45322	p 333	A93-49577	p 383
A93-39280	p 271	A93-41388	p 296	A93-42094	p 345	A93-45323	p 340	A93-49578	p 383
A93-39571	p 286	A93-41389	p 296	A93-42107	p 345	A93-45436	p 350	A93-49579	p 383
A93-39572	p 286	A93-41390	p 273	A93-42114	p 345	A93-45598	p 364	A93-49580	p 383
A93-39573	p 289	A93-41391	p 274	A93-42119	p 345	A93-45685	p 364	A93-49581	p 383
A93-39574	p 289	A93-41392	p 296	A93-42121	p 345	A93-45687	p 364	A93-49582	p 383
A93-39575	p 286	A93-41401	p 296	A93-42122	p 346	A93-45688	p 364	A93-49583	p 383
A93-39703	p 271	A93-41402	p 296	A93-42123	p 346	A93-45691	p 359	A93-49584	p 383
A93-39704	p 277	A93-41404	p 296	A93-42124	p 346	A93-45692	p 359	A93-49585	p 383
A93-39705	p 278	A93-41405	p 297	A93-42125	p 346	A93-45695	p 357	A93-49586	p 383
A93-39706	p 278	A93-41406	p 297	A93-42126	p 331	A93-46075	p 357	A93-49587	p 383
A93-39707	p 271	A93-41407	p 297	A93-42127	p 346	A93-46300	p 357	A93-49588	p 383
A93-39708	p 286	A93-41408	p 297	A93-42128	p 346	A93-46468	p 357	A93-49589	p 383
A93-39709	p 278	A93-41411	p 297	A93-42129	p 347	A93-46469	p 357	A93-49590	p 383
A93-39710	p 278	A93-41412	p 297	A93-42130	p 347	A93-46470	p 357	A93-49591	p 383
A93-39711	p 271	A93-41413	p 298	A93-42149	p 347	A93-46471	p 358	A93-49592	p 383
A93-39712	p 272	A93-41418	p 298	A93-42151	p 347	A93-46472	p 358	A93-49593	p 383
A93-39713	p 278	A93-41419	p 298	A93-42173	p 347	A93-46606	p 358	A93-49594	p 383
A93-39714	p 278	A93-41420	p 298	A93-42186	p 323	A93-46801	p 364	A93-49595	p 383
A93-39715	p 272	A93-41423	p 298	A93-42187	p 323	A93-46810	p 365	A93-49596	p 383
A93-39716	p 278	A93-41424	p 298	A93-42188	p 331	A93-46966	p 363	A93-49597	p 383
A93-39717	p 272	A93-41425	p 299	A93-42189	p 331	A93-46967	p 359	A93-49598	p 383
A93-39725	p 279	A93-41426	p 299	A93-42190	p 323	A93-46968	p 360	A93-49599	p 383
A93-40308	p 272	A93-41427	p 299	A93-42191	p 331	A93-47019	p 365	A93-49600	p 383
A93-40548	p 272	A93-41428	p 299	A93-42192	p 323	A93-47096	p 360	A93-49601	p 383
A93-40549	p 279	A93-41431	p 299	A93-42193	p 323	A93-47097	p 360	A93-49602	p 383
A93-40550	p 279	A93-41434	p 299	A93-42450	p 324	A93-47098	p 360	A93-49603	p 383
A93-40771	p 287	A93-41435	p 299	A93-42658	p 339	A93-47099	p 358	A93-49604	p 383
A93-40772	p 287	A93-41436	p 300	A93-42668	p 324	A93-47100	p 358	A93-49605	p 383
A93-40773	p 272	A93-41437	p 300	A93-42814	p 347	A93-47125	p 372	A93-49606	p 383
A93-40774	p 279	A93-41438	p 300	A93-42840	p 348	A93-49177	p 378	A93-49607	p 383
A93-41075	p 273	A93-41439	p 300	A93-42841	p 348	A93-49178	p 379	A93-49608	p 383
A93-41117	p 279	A93-41440	p 300	A93-42842	p 348	A93-49179	p 375	A93-49609	p 383
A93-41118	p 279	A93-41441	p 300	A93-42843	p 348	A93-49180	p 379	A93-49610	p 383
A93-41119	p 280	A93-41442	p 301	A93-42844	p 348	A93-49206	p 375	A93-49611	p 383
A93-41120	p 280	A93-41443	p 301	A93-42845	p 348	A93-49207	p 375	A93-49612	p 383
A93-41121	p 280	A93-41444	p 301	A93-42847	p 349	A93-49208	p 375	A93-49613	p 383
A93-41122	p 280	A93-41445	p 301	A93-42848	p 349	A93-49209	p 375	A93-49614	p 383
A93-41123	p 280	A93-41446	p 301	A93-42849	p 349	A93-49210	p 376	A93-49615	p 383
A93-41124	p 273	A93-41449	p 302	A93-42850	p 349	A93-49211	p 376	A93-49616	p 383
A93-41125	p 281	A93-41450	p 302	A93-42915	p 324	A93-49212	p 376	A93-49617	p 383
A93-41165	p 281	A93-41451	p 302	A93-43024	p 339	A93-49213	p 376	A93-49618	p 383
A93-41166	p 287	A93-41452	p 302	A93-43025	p 324	A93-49214	p 376	A93-49619	p 383
A93-41167	p 273	A93-41453	p 302	A93-43034	p 324	A93-49218	p 389	A93-49620	p 383
A93-41168	p 281	A93-41463	p 302	A93-43035	p 324	A93-49219	p 389	A93-49621	p 383
A93-41169	p 281	A93-41464	p 303	A93-43036	p 324	A93-49220	p 379	A93-49622	p 383
A93-41170	p 281	A93-41468	p 282	A93-43070	p 325	A93-49221	p 379	A93-49623	p 383
A93-41171	p 282	A93-41472	p 303	A93-43074	p 325	A93-49222	p 379	A93-49624	p 383
A93-41172	p 289	A93-41473	p 303	A93-43078	p 325	A93-49223	p 389	A93-49625	p 383
A93-41173	p 289	A93-41474	p 303	A93-43079	p 325	A93-49224	p 376	A93-49626	p 383
A93-41174	p 289	A93-41475	p 303	A93-43136	p 325	A93-49225	p 379	A93-49627	p 383
A93-41175	p 289	A93-41478	p 303	A93-43330	p 339	A93-49226	p 380	A93-49628	p 383
A93-41306	p 289	A93-41480	p 304	A93-43372	p 349	A93-49227	p 380	A93-49629	p 383
A93-41307	p 290	A93-41482	p 304	A93-43722	p 349	A93-49228	p 380	A93-49630	p 383
A93-41309	p 290	A93-41483	p 304	A93-43791	p 354	A93-49276	p 387	A93-49631	p 383
A93-41310	p 290	A93-41484	p 304	A93-43792	p 354	A93-49277	p 387	A93-49632	p 383
A93-41311	p 290	A93-41485	p 304	A93-43793	p 354	A93-49291	p 380	A93-49633	p 383
A93-41312	p 290	A93-41493	p 304	A93-43794	p 325	A93-49292	p 380	A93-49634	p 383
A93-41313	p 290	A93-41497	p 305	A93-43795	p 325	A93-49293	p 381	A93-49635	p 383
A93-41314	p 291	A93-41503	p 305	A93-44176	p 326	A93-49294	p 377	A93-49636	p 383
A93-41315	p 291	A93-41504	p 305	A93-44177	p 326	A93-49295	p 381	A93-49637	p 383
A93-41316	p 291	A93-41505	p 305	A93-44178	p 326	A93-49302	p 390	A93-49638	p 383
A93-41317	p 291	A93-41506	p 305	A93-44179	p 326	A93-49357	p 390	A93-49639	p 383
A93-41319	p 291	A93-41507	p 305	A93-44180	p 332	A93-49393	p 390	A93-49640	p 383
A93-41320	p 291	A93-41509	p 306	A93-44181	p 326	A93-49394	p 390	A93-49641	p 383
A93-41321	p 291	A93-41510	p 306	A93-44182	p 332	A93-49397	p 390	A93-49642	p 383
A93-41322	p 287	A93-41511	p 306	A93-44183	p 326	A93-49398	p 390	A93-49643	p 383
A93-41323	p 292	A93-41512	p 306	A93-44184	p 327	A93-49399	p 381	A93-49644	p 383
A93-41324	p 287	A93-41513	p 306	A93-44842	p 327	A93-49400	p 381	A93-49645	p 383
A93-41325	p 292	A93-41514	p 306	A93-44843	p 327	A93-49401	p 381	A93-49646	p 383
A93-41326	p 292	A93-41515	p 307	A93-44844	p 327	A93-49402	p 381	A93-49647	p 383
A93-41327	p 292	A93-41516	p 307	A93-44845	p 327	A93-49403	p 382	A93-49648	p 383
A93-41328	p 292	A93-41517	p 307	A93-44846	p 350	A93-49404	p 387	A93-49649	p 383
A93-41333	p 292	A93-41518	p 307	A93-44847	p 332	A93-49405	p 391	A93-49650	p 383
A93-41335	p 293	A93-41519	p 307	A93-44848	p 332	A93-49406	p 387	A93-49651	p 383
A93-41337	p 293	A93-41520	p 274	A93-44849	p 332	A93-49443	p 391	A93-49652	p 383
A93-41338	p 293	A93-41521	p 307	A93-44877	p 355	A93-49445	p 391	A93-49653	p 383
A93-41339	p 293	A93-41534	p 308	A93-44878	p 327	A93-49451	p 391	A93-49654	p 383
A93-41340	p 293	A93-41539	p 308	A93-44879	p 327	A93-49555	p 377	A93-49655	p 383
A93-41341	p 293	A93-41541	p 308	A93-44880	p 328	A93-49556	p 377	A93-49656	p 383
A93-41342	p 293	A93-41542	p 308	A93-44889	p 350	A93-49560	p 382	A93-49657	p 383
				A93-44900	p 328	A93-49561	p 377	A93-49658	p 383



## A93-53291

A93-53291 p 397  
 A93-53292 p 412  
 A93-53294 p 412  
 A93-53350 p 398  
 A93-53746 p 409  
 A93-54158 p 409  
 A93-54163 p 398  
 A93-54306 p 400  
 A93-54308 p 409  
 A93-54309 p 401  
 A93-54410 p 409  
 A93-54826 p 409  
 A93-54845 p 409  
 A93-54868 p 410  
 A93-54874 p 410  
 A93-54887 p 410  
 A93-54971 p 398  
 A93-55161 p 404  
 A93-55162 p 401  
 A93-55163 p 401  
 A93-55164 p 405  
 A93-55165 p 401  
 A93-55166 p 405  
 A93-55167 p 401  
 A93-55168 p 398  
 A93-55169 p 401  
 A93-55292 p 398  
 A93-55328 p 402  
 A93-55329 p 398  
 A93-55330 p 405  
 A93-55332 p 402  
 A93-55333 p 402  
 A93-55334 p 410  
 A93-55348 p 405  
 A93-55457 p 402  
 A93-55458 p 399  
 A93-55469 p 410  
 A93-55579 p 405  
 A93-55580 p 399  
 A93-55802 p 402  
 A93-55805 p 402  
 A93-55838 p 410  
 A93-55929 p 402  
 A93-55930 p 399  
 A93-55931 p 399  
 A93-55932 p 399  
 A93-55933 p 399  
 A93-55934 p 399  
 A93-55935 p 403  
 A93-55936 p 399  
 A93-55937 p 400  
 A93-55938 p 410  
 A93-55939 p 403  
 A93-55940 p 403  
 A93-55941 p 403  
 A93-55942 p 403  
 A93-55943 p 403  
 A93-55944 p 403  
 A93-55945 p 404  
 A93-55946 p 404  
 A93-55947 p 404  
 A93-55948 p 405  
 A93-55949 p 406  
 A93-55997 p 412  
 A93-55998 p 412  
 A93-55999 p 400  
 A93-56000 p 412  
 A93-56254 p 411  
 A93-56255 p 411  
 A93-56256 p 411  
 A93-56260 p 411  
 A93-56548 p 400

N93-10075 p 12  
 N93-10076 p 12  
 N93-10077 p 12  
 N93-10079 p 12  
 N93-10080 p 12  
 N93-10085 p 4  
 N93-10109 p 4  
 N93-10110 p 5  
 N93-10217 p 30  
 N93-10222 p 12  
 N93-10261 p 30  
 N93-10271 p 12  
 N93-10278 p 24  
 N93-10288 p 30  
 N93-10321 p 24  
 N93-10438 p 12  
 N93-10461 p 5  
 N93-10613 p 13  
 N93-10626 p 13  
 N93-10628 p 5  
 N93-10650 p 13  
 N93-10658 p 25  
 N93-10661 p 13

N93-10662 p 25  
 N93-10709 p 13  
 N93-10713 p 30  
 N93-10719 p 25  
 N93-10765 p 14  
 N93-10796 p 14  
 N93-10834 p 5  
 N93-10835 p 5  
 N93-10890 p 31  
 N93-10974 p 5  
 N93-10979 p 25  
 N93-10994 p 31  
 N93-11081 p 25  
 N93-11146 p 14  
 N93-11193 p 14  
 N93-11212 p 26  
 N93-11279 p 31  
 N93-11283 p 14  
 N93-11284 p 14  
 N93-11285 p 15  
 N93-11286 p 15  
 N93-11287 p 15  
 N93-11288 p 15  
 N93-11289 p 15  
 N93-11290 p 15  
 N93-11291 p 16  
 N93-11292 p 16  
 N93-11293 p 16  
 N93-11294 p 16  
 N93-11295 p 16  
 N93-11296 p 17  
 N93-11297 p 17  
 N93-11298 p 17  
 N93-11299 p 18  
 N93-11300 p 18  
 N93-11301 p 18  
 N93-11302 p 18  
 N93-11303 p 18  
 N93-11304 p 19  
 N93-11305 p 19  
 N93-11306 p 19  
 N93-11307 p 19  
 N93-11308 p 20  
 N93-11309 p 20  
 N93-11310 p 20  
 N93-11311 p 20  
 N93-11312 p 21  
 N93-11313 p 21  
 N93-11314 p 21  
 N93-11315 p 21  
 N93-11316 p 21  
 N93-11317 p 21  
 N93-11318 p 22  
 N93-11415 p 26  
 N93-11445 p 22  
 N93-11488 p 26  
 N93-11503 p 26  
 N93-11559 p 31  
 N93-11561 p 22  
 N93-11630 p 5  
 N93-11649 p 31  
 N93-11743 p 31  
 N93-11779 p 26  
 N93-11783 p 32  
 N93-11784 p 32  
 N93-11812 p 32  
 N93-11841 p 22  
 N93-11873 p 23  
 N93-11893 p 23  
 N93-11922 p 32  
 N93-11924 p 32  
 N93-11930 p 32  
 N93-11941 p 33  
 N93-11976 p 33  
 N93-11981 p 33  
 N93-12014 p 6  
 N93-12018 p 33  
 N93-12079 p 33  
 N93-12145 p 23  
 N93-12174 p 6  
 N93-12195 p 34  
 N93-12211 p 34  
 N93-12225 p 27  
 N93-12229 p 34  
 N93-12252 p 27  
 N93-12266 p 6  
 N93-12291 p 34  
 N93-12315 p 6  
 N93-12319 p 35  
 N93-12423 p 34  
 N93-12427 p 23  
 N93-12432 p 27  
 N93-12469 p 23  
 N93-12482 p 6  
 N93-12486 p 35  
 N93-12491 p 35

N93-12508 p 35  
 N93-12509 p 35  
 N93-12545 p 63  
 N93-12566 p 49  
 N93-12576 p 63  
 N93-12609 p 63  
 N93-12612 p 49  
 N93-12649 p 49  
 N93-12662 p 57  
 N93-12712 p 63  
 N93-12732 p 63  
 N93-12751 p 49  
 N93-12756 p 50  
 N93-12768 p 39  
 N93-12860 p 64  
 N93-12871 p 39  
 N93-12901 p 40  
 N93-12905 p 50  
 N93-12945 p 50  
 N93-12949 p 40  
 N93-12960 p 64  
 N93-12966 p 64  
 N93-12983 p 64  
 N93-12990 p 64  
 N93-13023 p 50  
 N93-13033 p 40  
 N93-13034 p 40  
 N93-13061 p 50  
 N93-13063 p 40  
 N93-13116 p 50  
 N93-13167 p 40  
 N93-13252 p 50  
 N93-13269 p 40  
 N93-13327 p 41  
 N93-13449 p 51  
 N93-13450 p 65  
 N93-13457 p 41  
 N93-13464 p 65  
 N93-13486 p 65  
 N93-13503 p 41  
 N93-13520 p 41  
 N93-13522 p 51  
 N93-13571 p 65  
 N93-13612 p 42  
 N93-13692 p 65  
 N93-13700 p 62  
 N93-13717 p 65  
 N93-13863 p 42  
 N93-13874 p 66  
 N93-13909 p 66  
 N93-13941 p 51  
 N93-13991 p 66  
 N93-13992 p 66  
 N93-13993 p 67  
 N93-13994 p 67  
 N93-13996 p 67  
 N93-13997 p 67  
 N93-13998 p 67  
 N93-13999 p 67  
 N93-14000 p 68  
 N93-14001 p 68  
 N93-14002 p 51  
 N93-14003 p 68  
 N93-14013 p 68  
 N93-14014 p 68  
 N93-14018 p 69  
 N93-14020 p 57  
 N93-14027 p 51  
 N93-14028 p 51  
 N93-14084 p 52  
 N93-14090 p 69  
 N93-14103 p 52  
 N93-14109 p 52  
 N93-14161 p 69  
 N93-14162 p 52  
 N93-14163 p 52  
 N93-14210 p 52  
 N93-14240 p 52  
 N93-14267 p 57  
 N93-14416 p 58  
 N93-14427 p 69  
 N93-14510 p 58  
 N93-14520 p 69  
 N93-14532 p 42  
 N93-14535 p 53  
 N93-14548 p 69  
 N93-14554 p 70  
 N93-14556 p 53  
 N93-14557 p 42  
 N93-14580 p 58  
 N93-14600 p 58  
 N93-14602 p 58  
 N93-14603 p 53  
 N93-14614 p 70  
 N93-14646 p 58  
 N93-14648 p 42

N93-14651 p 70  
 N93-14660 p 59  
 N93-14708 p 53  
 N93-14713 p 70  
 N93-14731 p 53  
 N93-14782 p 53  
 N93-14788 p 59  
 N93-14789 p 54  
 N93-14870 p 70  
 N93-14951 p 70  
 N93-15006 p 54  
 N93-15009 p 54  
 N93-15053 p 54  
 N93-15067 p 59  
 N93-15184 p 59  
 N93-15192 p 54  
 N93-15198 p 55  
 N93-15208 p 43  
 N93-15211 p 43  
 N93-15216 p 59  
 N93-15249 p 55  
 N93-15329 p 60  
 N93-15363 p 71  
 N93-15400 p 60  
 N93-15583 p 55  
 N93-15710 p 104  
 N93-15823 p 80  
 N93-15824 p 95  
 N93-15825 p 110  
 N93-15900 p 95  
 N93-15965 p 80  
 N93-15968 p 104  
 N93-16033 p 104  
 N93-16041 p 95  
 N93-16048 p 104  
 N93-16111 p 99  
 N93-16166 p 95  
 N93-16187 p 95  
 N93-16189 p 99  
 N93-16258 p 104  
 N93-16441 p 96  
 N93-16552 p 96  
 N93-16619 p 96  
 N93-16699 p 105  
 N93-16709 p 110  
 N93-16783 p 99  
 N93-16799 p 81  
 N93-16800 p 81  
 N93-16801 p 99  
 N93-16802 p 81  
 N93-16803 p 81  
 N93-16804 p 81  
 N93-16805 p 81  
 N93-16806 p 81  
 N93-16807 p 82  
 N93-16808 p 100  
 N93-16840 p 105  
 N93-16862 p 105  
 N93-16865 p 105  
 N93-16866 p 105  
 N93-16867 p 105  
 N93-16962 p 96  
 N93-17026 p 100  
 N93-17042 p 106  
 N93-17045 p 106  
 N93-17049 p 82  
 N93-17058 p 96  
 N93-17087 p 106  
 N93-17088 p 106  
 N93-17189 p 82  
 N93-17214 p 82  
 N93-17230 p 97  
 N93-17303 p 82  
 N93-17310 p 100  
 N93-17359 p 82  
 N93-17442 p 106  
 N93-17443 p 106  
 N93-17444 p 106  
 N93-17445 p 107  
 N93-17446 p 107  
 N93-17447 p 107  
 N93-17448 p 107  
 N93-17458 p 83  
 N93-17684 p 100  
 N93-17697 p 107  
 N93-17710 p 108  
 N93-17780 p 83  
 N93-17805 p 108  
 N93-17806 p 108  
 N93-17816 p 130  
 N93-17817 p 119  
 N93-17820 p 130  
 N93-17822 p 119  
 N93-17857 p 131  
 N93-17895 p 120  
 N93-17896 p 120

N93-17900 p 120  
 N93-17918 p 120  
 N93-17919 p 131  
 N93-17921 p 131  
 N93-17926 p 120  
 N93-17970 p 138  
 N93-17971 p 138  
 N93-17973 p 139  
 N93-17985 p 120  
 N93-18006 p 121  
 N93-18018 p 139  
 N93-18019 p 139  
 N93-18027 p 131  
 N93-18029 p 139  
 N93-18035 p 139  
 N93-18108 p 121  
 N93-18111 p 139  
 N93-18113 p 140  
 N93-18153 p 140  
 N93-18156 p 140  
 N93-18159 p 121  
 N93-18200 p 140  
 N93-18205 p 131  
 N93-18209 p 121  
 N93-18210 p 121  
 N93-18211 p 121  
 N93-18217 p 121  
 N93-18223 p 122  
 N93-18252 p 122  
 N93-18264 p 122  
 N93-18273 p 132  
 N93-18280 p 122  
 N93-18291 p 132  
 N93-18292 p 122  
 N93-18293 p 140  
 N93-18294 p 132  
 N93-18295 p 123  
 N93-18298 p 132  
 N93-18301 p 123  
 N93-18351 p 112  
 N93-18359 p 132  
 N93-18362 p 123  
 N93-18363 p 123  
 N93-18375 p 123  
 N93-18376 p 123  
 N93-18381 p 124  
 N93-18517 p 141  
 N93-18545 p 112  
 N93-18546 p 112  
 N93-18547 p 113  
 N93-18548 p 113  
 N93-18549 p 113  
 N93-18550 p 113  
 N93-18551 p 113  
 N93-18552 p 113  
 N93-18553 p 114  
 N93-18561 p 114  
 N93-18596 p 124  
 N93-18608 p 114  
 N93-18668 p 133  
 N93-18949 p 133  
 N93-18952 p 124  
 N93-19037 p 114  
 N93-19039 p 141  
 N93-19054 p 114  
 N93-19072 p 124  
 N93-19104 p 141  
 N93-19369 p 125  
 N93-19377 p 114  
 N93-19399 p 115  
 N93-19449 p 133  
 N93-19464 p 141  
 N93-19465 p 141  
 N93-19466 p 142  
 N93-19648 p 125  
 N93-19660 p 133  
 N93-19662 p 142  
 N93-19663 p 125  
 N93-19664 p 125  
 N93-19665 p 142  
 N93-19666 p 142  
 N93-19667 p 142  
 N93-19668 p 142  
 N93-19669 p 142  
 N93-19670 p 143  
 N93-19671 p 143  
 N93-19672 p 143  
 N93-19679 p 133  
 N93-19680 p 133  
 N93-19681 p 134  
 N93-19682 p 134  
 N93-19683 p 125  
 N93-19694 p 126  
 N93-19695 p 126  
 N93-19696 p 126  
 N93-19697 p 126

## ACCESSION NUMBER INDEX

## ACCESSION NUMBER INDEX

N93-19698 # p 126  
N93-19699 # p 143  
N93-19703 # p 134  
N93-19704 # p 143  
N93-19705 # p 134  
N93-19707 # p 127  
N93-19708 # p 127  
N93-19709 # p 134  
N93-19710 # p 127  
N93-19751 # p 115  
N93-19757 # p 144  
N93-19758 # p 144  
N93-19759 # p 144  
N93-19760 # p 144  
N93-19761 # p 144  
N93-19762 # p 144  
N93-19764 # p 145  
N93-19765 # p 145  
N93-19766 # p 145  
N93-19767 # p 145  
N93-19769 # p 145  
N93-19770 # p 146  
N93-19772 # p 146  
N93-19773 # p 146  
N93-19774 # p 146  
N93-19775 # p 146  
N93-19776 # p 146  
N93-19777 # p 147  
N93-19778 # p 147  
N93-19779 # p 147  
N93-19780 # p 147  
N93-19781 # p 147  
N93-19782 # p 148  
N93-19784 # p 148  
N93-19785 # p 148  
N93-19838 # p 127  
N93-19882 # p 128  
N93-19891 # p 115  
N93-19892 # p 128  
N93-19917 # p 148  
N93-19955 # p 148  
N93-19956 # p 135  
N93-20050 # p 148  
N93-20065 # p 149  
N93-20303 # p 128  
N93-20314 # p 149  
N93-20318 # p 128  
N93-20319 # p 149  
N93-20326 # p 135  
N93-20384 # p 128  
N93-20400 # p 129  
N93-20413 # p 149  
N93-20563 # p 171  
N93-20580 # p 171  
N93-20587 # p 172  
N93-20736 # p 172  
N93-20848 # p 157  
N93-20889 # p 172  
N93-20908 # p 181  
N93-20959 # p 158  
N93-20998 # p 172  
N93-21044 # p 172  
N93-21046 # p 172  
N93-21047 # p 172  
N93-21074 # p 158  
N93-21085 # p 158  
N93-21097 # p 158  
N93-21098 # p 158  
N93-21099 # p 158  
N93-21112 # p 173  
N93-21113 # p 193  
N93-21114 # p 173  
N93-21161 # p 194  
N93-21215 # p 194  
N93-21230 # p 159  
N93-21269 # p 194  
N93-21369 # p 173  
N93-21370 # p 194  
N93-21402 # p 181  
N93-21436 # p 194  
N93-21498 # p 173  
N93-21537 # p 194  
N93-21753 # p 195  
N93-21795 # p 195  
N93-21931 # p 159  
N93-21933 # p 159  
N93-22002 # p 195  
N93-22163 # p 173  
N93-22164 # p 174  
N93-22167 # p 195  
N93-22188 # p 174  
N93-22189 # p 174  
N93-22190 # p 195  
N93-22191 # p 196  
N93-22195 # p 196  
N93-22268 # p 196

N93-22389 # p 196  
N93-22622 # p 205  
N93-22623 # p 205  
N93-22624 # p 205  
N93-22625 # p 206  
N93-22628 # p 233  
N93-22629 # p 206  
N93-22630 # p 217  
N93-22640 # p 233  
N93-22649 # p 206  
N93-22651 # p 207  
N93-22655 # p 217  
N93-22663 # p 234  
N93-22774 # p 217  
N93-22800 # p 207  
N93-22913 # p 207  
N93-23068 # p 207  
N93-23069 # p 207  
N93-23070 # p 208  
N93-23071 # p 208  
N93-23079 # p 208  
N93-23080 # p 208  
N93-23081 # p 209  
N93-23082 # p 209  
N93-23129 # p 234  
N93-23169 # p 209  
N93-23233 # p 209  
N93-23343 # p 209  
N93-23369 # p 209  
N93-23410 # p 217  
N93-23414 # p 217  
N93-23451 # p 234  
N93-23459 # p 217  
N93-23479 # p 224  
N93-23647 # p 234  
N93-23660 # p 234  
N93-23734 # p 218  
N93-23908 # p 237  
N93-23960 # p 224  
N93-23984 # p 218  
N93-23986 # p 224  
N93-23992 # p 235  
N93-23995 # p 235  
N93-24001 # p 235  
N93-24009 # p 218  
N93-24021 # p 218  
N93-24028 # p 210  
N93-24067 # p 235  
N93-24088 # p 218  
N93-24092 # p 219  
N93-24093 # p 219  
N93-24104 # p 225  
N93-24128 # p 235  
N93-24168 # p 236  
N93-24192 # p 225  
N93-24227 # p 225  
N93-24238 # p 219  
N93-24247 # p 219  
N93-24297 # p 225  
N93-24319 # p 225  
N93-24345 # p 225  
N93-24346 # p 226  
N93-24352 # p 226  
N93-24354 # p 219  
N93-24362 # p 236  
N93-24363 # p 220  
N93-24366 # p 226  
N93-24367 # p 220  
N93-24370 # p 220  
N93-24373 # p 237  
N93-24379 # p 210  
N93-24382 # p 226  
N93-24386 # p 220  
N93-24398 # p 220  
N93-24399 # p 221  
N93-24400 # p 221  
N93-24401 # p 210  
N93-24402 # p 210  
N93-24403 # p 210  
N93-24404 # p 211  
N93-24405 # p 237  
N93-24406 # p 236  
N93-24420 # p 221  
N93-24431 # p 226  
N93-24441 # p 236  
N93-24455 # p 211  
N93-24490 # p 236  
N93-24502 # p 237  
N93-24551 # p 221  
N93-24590 # p 221  
N93-24738 # p 222  
N93-24763 # p 222  
N93-25099 # p 237  
N93-25104 # p 211  
N93-25186 # p 253  
N93-25195 # p 244

N93-25203 # p 257  
N93-25213 # p 257  
N93-25214 # p 253  
N93-25242 # p 244  
N93-25318 # p 264  
N93-25405 # p 244  
N93-25406 # p 244  
N93-25407 # p 253  
N93-25415 # p 264  
N93-25457 # p 244  
N93-25531 # p 264  
N93-25566 # p 244  
N93-25567 # p 253  
N93-25568 # p 253  
N93-25569 # p 253  
N93-25592 # p 254  
N93-25593 # p 254  
N93-25594 # p 254  
N93-25595 # p 258  
N93-25617 # p 265  
N93-25628 # p 265  
N93-25629 # p 254  
N93-25654 # p 258  
N93-25736 # p 258  
N93-25764 # p 245  
N93-25778 # p 265  
N93-25787 # p 265  
N93-25815 # p 258  
N93-25840 # p 265  
N93-25859 # p 266  
N93-25867 # p 266  
N93-25877 # p 245  
N93-25888 # p 266  
N93-25900 # p 254  
N93-25904 # p 266  
N93-25944 # p 255  
N93-25994 # p 245  
N93-26047 # p 266  
N93-26061 # p 266  
N93-26066 # p 245  
N93-26068 # p 255  
N93-26069 # p 245  
N93-26073 # p 245  
N93-26076 # p 267  
N93-26077 # p 246  
N93-26082 # p 258  
N93-26088 # p 267  
N93-26089 # p 267  
N93-26133 # p 255  
N93-26138 # p 259  
N93-26153 # p 267  
N93-26157 # p 269  
N93-26218 # p 255  
N93-26229 # p 267  
N93-26259 # p 246  
N93-26265 # p 268  
N93-26307 # p 259  
N93-26347 # p 259  
N93-26349 # p 260  
N93-26353 # p 260  
N93-26356 # p 260  
N93-26364 # p 260  
N93-26391 # p 260  
N93-26404 # p 268  
N93-26435 # p 260  
N93-26436 # p 260  
N93-26446 # p 261  
N93-26449 # p 261  
N93-26489 # p 261  
N93-26521 # p 261  
N93-26587 # p 246  
N93-26700 # p 246  
N93-26945 # p 256  
N93-27085 # p 246  
N93-27100 # p 310  
N93-27101 # p 310  
N93-27102 # p 282  
N93-27103 # p 288  
N93-27113 # p 282  
N93-27121 # p 310  
N93-27122 # p 274  
N93-27152 # p 274  
N93-27158 # p 283  
N93-27177 # p 311  
N93-27360 # p 275  
N93-27409 # p 283  
N93-27654 # p 283  
N93-27718 # p 311  
N93-27719 # p 311  
N93-27720 # p 311  
N93-27721 # p 311  
N93-27722 # p 311  
N93-27723 # p 312  
N93-27724 # p 312  
N93-27725 # p 312  
N93-27787 # p 312

N93-27788 # p 312  
N93-27789 # p 312  
N93-27790 # p 312  
N93-27791 # p 312  
N93-27792 # p 312  
N93-27793 # p 313  
N93-27794 # p 313  
N93-27795 # p 313  
N93-27847 # p 313  
N93-27848 # p 313  
N93-27849 # p 313  
N93-27850 # p 314  
N93-27851 # p 314  
N93-27858 # p 314  
N93-27859 # p 314  
N93-27860 # p 314  
N93-27923 # p 283  
N93-27927 # p 314  
N93-27967 # p 315  
N93-27976 # p 315  
N93-27977 # p 315  
N93-27978 # p 315  
N93-27979 # p 315  
N93-27985 # p 315  
N93-27989 # p 275  
N93-28029 # p 316  
N93-28031 # p 316  
N93-28032 # p 316  
N93-28033 # p 316  
N93-28034 # p 316  
N93-28112 # p 317  
N93-28122 # p 283  
N93-28128 # p 288  
N93-28199 # p 275  
N93-28200 # p 275  
N93-28212 # p 275  
N93-28293 # p 284  
N93-28306 # p 284  
N93-28307 # p 288  
N93-28415 # p 276  
N93-28464 # p 317  
N93-28469 # p 284  
N93-28479 # p 317  
N93-28622 # p 288  
N93-28651 # p 276  
N93-28683 # p 276  
N93-28684 # p 276  
N93-28739 # p 284  
N93-28740 # p 284  
N93-28741 # p 284  
N93-28742 # p 284  
N93-28757 # p 317  
N93-28758 # p 284  
N93-28759 # p 285  
N93-28835 # p 285  
N93-28848 # p 276  
N93-28850 # p 317  
N93-28853 # p 317  
N93-28855 # p 318  
N93-28856 # p 318  
N93-28857 # p 318  
N93-28858 # p 318  
N93-28859 # p 318  
N93-28860 # p 319  
N93-28861 # p 319  
N93-28862 # p 319  
N93-28863 # p 319  
N93-28864 # p 319  
N93-28865 # p 319  
N93-28866 # p 320  
N93-28867 # p 320  
N93-28870 # p 320  
N93-28872 # p 320  
N93-28884 # p 320  
N93-28890 # p 276  
N93-28895 # p 322  
N93-28897 # p 320  
N93-28901 # p 288  
N93-28939 # p 285  
N93-28941 # p 321  
N93-28942 # p 321  
N93-28952 # p 276  
N93-28977 # p 321  
N93-29041 # p 285  
N93-29044 # p 321  
N93-29174 # p 276  
N93-29181 # p 276  
N93-29199 # p 286  
N93-29216 # p 277  
N93-29274 # p 277  
N93-29324 # p 321  
N93-29340 # p 322  
N93-29400 # p 333  
N93-29406 # p 350  
N93-29421 # p 333  
N93-29444 # p 350

## N93-31917

N93-29471 # p 350  
N93-29481 # p 340  
N93-29484 # p 351  
N93-29502 # p 333  
N93-29509 # p 333  
N93-29546 # p 334  
N93-29564 # p 340  
N93-29606 # p 351  
N93-29607 # p 351  
N93-29610 # p 340  
N93-29620 # p 334  
N93-29651 # p 334  
N93-29675 # p 351  
N93-29702 # p 329  
N93-29703 # p 330  
N93-29727 # p 351  
N93-29728 # p 351  
N93-29733 # p 352  
N93-29734 # p 352  
N93-29747 # p 352  
N93-29748 # p 352  
N93-29760 # p 352  
N93-29820 # p 334  
N93-29845 # p 353  
N93-29888 # p 353  
N93-29889 # p 353  
N93-29915 # p 330  
N93-29924 # p 353  
N93-30026 # p 340  
N93-30027 # p 340  
N93-30033 # p 341  
N93-30153 # p 334  
N93-30160 # p 335  
N93-30163 # p 341  
N93-30167 # p 353  
N93-30192 # p 335  
N93-30196 # p 335  
N93-30204 # p 353  
N93-30269 # p 335  
N93-30322 # p 341  
N93-30382 # p 335  
N93-30400 # p 335  
N93-30421 # p 335  
N93-30422 # p 336  
N93-30425 # p 341  
N93-30426 # p 341  
N93-30483 # p 330  
N93-30494 # p 336  
N93-30515 # p 336  
N93-30542 # p 341  
N93-30543 # p 342  
N93-30566 # p 354  
N93-30575 # p 342  
N93-30588 # p 336  
N93-30590 # p 354  
N93-30594 # p 330  
N93-30613 # p 336  
N93-30659 # p 336  
N93-30665 # p 330  
N93-30676 # p 342  
N93-30679 # p 342  
N93-30680 # p 342  
N93-30684 # p 342  
N93-30818 # p 331  
N93-30882 # p 336  
N93-30890 # p 337  
N93-30894 # p 337  
N93-30897 # p 337  
N93-30904 # p 337  
N93-30908 # p 337  
N93-31061 # p 337  
N93-31094 # p 338  
N93-31138 # p 338  
N93-31140 # p 338  
N93-31158 # p 338  
N93-31161 # p 331  
N93-31225 # p 338  
N93-31229 # p 343  
N93-31230 # p 343  
N93-31231 # p 343  
N93-31232 # p 343  
N93-31233 # p 343  
N93-31234 # p 343  
N93-31235 # p 344  
N93-31236 # p 344  
N93-31237 # p 344  
N93-31238 # p 344  
N93-31454 # p 360  
N93-31455 # p 360  
N93-31456 # p 365  
N93-31457 # p 365  
N93-31458 # p 365  
N93-31573 # p 365  
N93-31729 # p 363  
N93-31844 # p 365  
N93-31917 # p 360

**N93-31924**

N93-31924 \* p 361  
N93-31981 # p 361  
N93-32006 # p 366  
N93-32011 # p 363  
N93-32012 # p 366  
N93-32015 # p 361  
N93-32018 # p 361  
N93-32035 p 358  
N93-32064 # p 364  
N93-32106 \* # p 366  
N93-32107 \* # p 366  
N93-32108 \* # p 366  
N93-32112 \* # p 367  
N93-32151 \* # p 367  
N93-32152 \* # p 367  
N93-32237 p 361  
N93-32240 # p 367  
N93-32241 # p 367  
N93-32242 # p 367  
N93-32243 # p 368  
N93-32244 # p 368  
N93-32245 # p 368  
N93-32246 # p 368  
N93-32247 # p 368  
N93-32248 # p 368  
N93-32249 # p 362  
N93-32250 # p 362  
N93-32251 # p 362  
N93-32252 # p 362  
N93-32253 # p 362  
N93-32254 # p 363  
N93-32255 # p 369  
N93-32256 # p 369  
N93-32257 # p 369  
N93-32258 # p 369  
N93-32259 # p 369  
N93-32260 # p 370  
N93-32261 # p 370  
N93-32262 # p 370  
N93-32263 # p 370  
N93-32264 # p 370  
N93-32265 # p 371  
N93-32266 # p 371  
N93-32267 # p 371  
N93-32268 # p 371  
N93-32269 # p 372  
N93-32328 \* # p 372  
N93-32354 \* # p 359  
N93-32356 \* # p 372  
N93-32364 \* # p 363  
N93-32365 \* # p 359  
N93-32406 # p 372  
N93-32423 # p 359

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**AEROSPACE MEDICINE  
AND BIOLOGY**  
**A CONTINUING BIBLIOGRAPHY**

Abstracts

January – December 1993

**TABLE OF CONTENTS**

<i>SP-7011</i>	
<i>Supplement</i>	<i>Page</i>
372 .....	1
373 .....	37
374 .....	73
375 .....	111
376 .....	151
377 .....	199
378 .....	239
379 .....	271
380 .....	323
381 .....	357
382 .....	375
383 .....	397

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